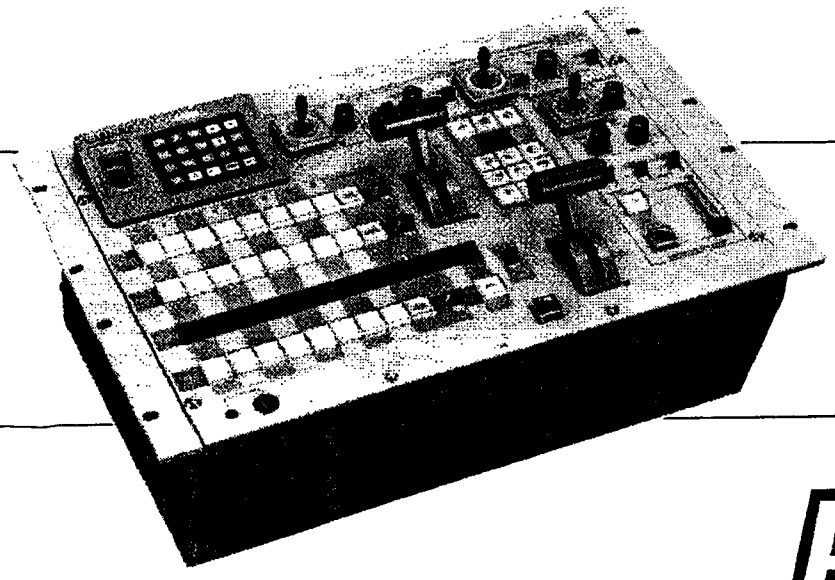
SONY

SEG-2550/2550P

OPERATING INSTRUCTIONS

Before operating the unit, please read this manual thoroughly and retain it for future reference.



E-File

OWNER'S RECORD

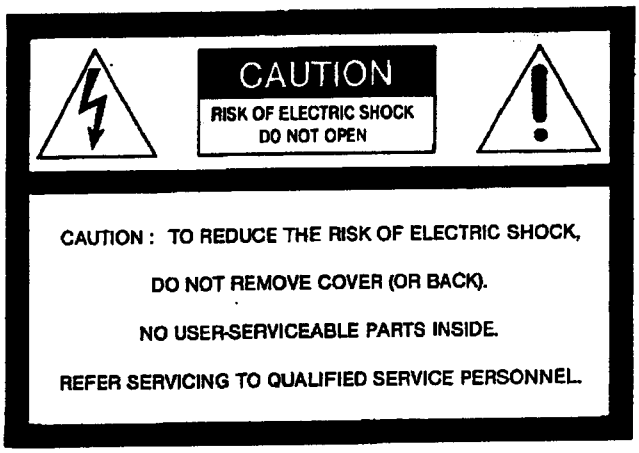
The model and serial numbers are located at the rear. Record the serial number in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. SEG-2550/2550P Serial No. _____

This manual covers two models of the special effects generator: the SEG-2550 for the NTSC color system and the SEG-2550P for the PAL color system. The functions and operating procedure of the two models are the same. They differ in respect of the signal to be processed by the unit and the operating power voltage.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING—TO REDUCE THE RISK OF FIRE, DO NOT REMOVE COVER (OR BACK).

Warning — This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

The shielded interface cable recommended in this manual must be used with this equipment in order to comply with the limits for a computing device pursuant to Subpart J of Part 15 of FCC rules.

PRECAUTIONS

On safety

- The SEG-2550 should be operated on 120 V AC, 60Hz. The SEG-2550P should be operated on 220 to 240 V AC, 50/60 Hz.
- Sholuld any solid object or liquid fall into the cabinet, uplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time.
- To disconnect a cord, pull it out by the plug. Never pull the cord itself.

On installation

- Allow adequate air circulation to prevent internal heat buildup. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation slot.
- Do not install the unit near heat sources such as radiators or air ducts or mechanical vibration or shock.
- Keep the unit away from equipment with strong magnets, such as speakers.

On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent such as alcohol or benzine which may damage the finish.

If you have any questions about this unit, contact your Sony dealer.

WARNING FOR THE CUSTOMERS IN THE UNITED KINGDOM

THIS APPARATUS MUST BE EARTHED to your 3-pin plug in accordance with following instructions.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow:	Earth (safety earth)
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured marking identifying the terminals in your plug, proceed as follows;

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked with the letter E or by the safety earth symbol ⏚ or colourd green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

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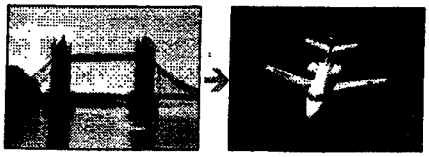
INTRODUCTION

The Sony SEG-2550/2550P special effects generator can apply a wide variety of special effects, such as mixing, wiping, keying and downstream keying, to the video program from a camera, VTR, etc., and output the resulting program.
In addition to the basic functions, the SEG-2550/2550P can memorize the setting and operation of effects and reproduce them. This is called the "E-File" function. The SEG-2550/2550P can be remotely controlled by a microcomputer or a VTR editing control unit through the RS-232C interface.
The built-in sync generator allows all equipment connected to the SEG-2550/2550P to be synchronized with the SEG-2550/2550P. The SEG-2550/2550P can synchronize with an external sync signal when it is supplied.

SPECIAL EFFECTS FUNCTION

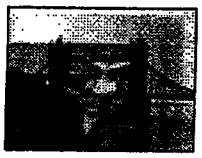
Cut
Instantaneous change from one picture to another during vertical blanking period is possible.



Mixing
Gradual transition by dissolving one picture into another is possible.

Wipe
Wipe function, a transition from one picture to another using a geometrical pattern moving across the screen, is provided. Wipe pattern can be selected from 137 patterns, and a variet of wipe effects such as pairing, echo, border and softness, are available.

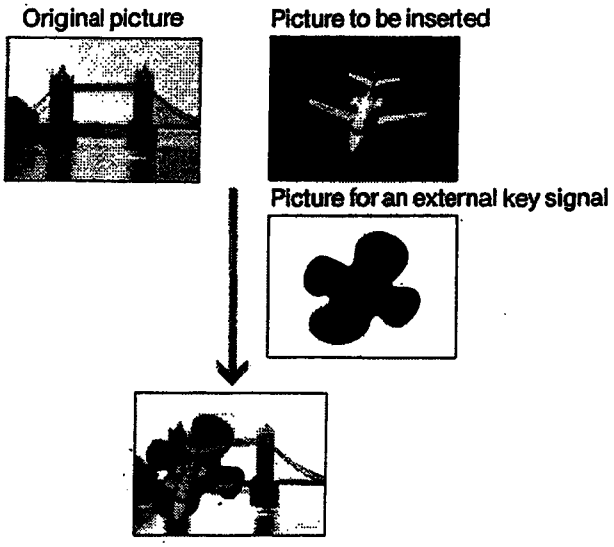
Pairing wipe


Echo wipe

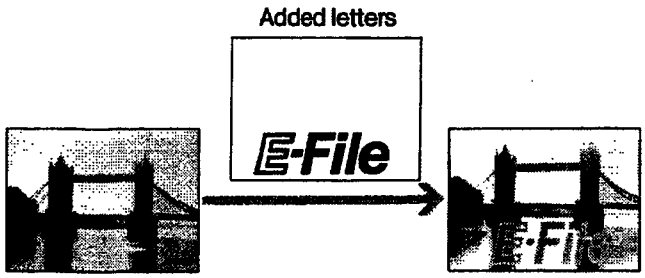
Border

Softness

External key
A part of one picture is cut out, and that area can be filled with another picture. The part to be cut out is determined by the picture (an external key signal) picked up by a black and white camera for the external key operation.



Downstream keyer
Captions or figures can be added on a picture. This is called downstream keyer. Added letters and figures can be colored, or shadow is added to them for easier viewing.



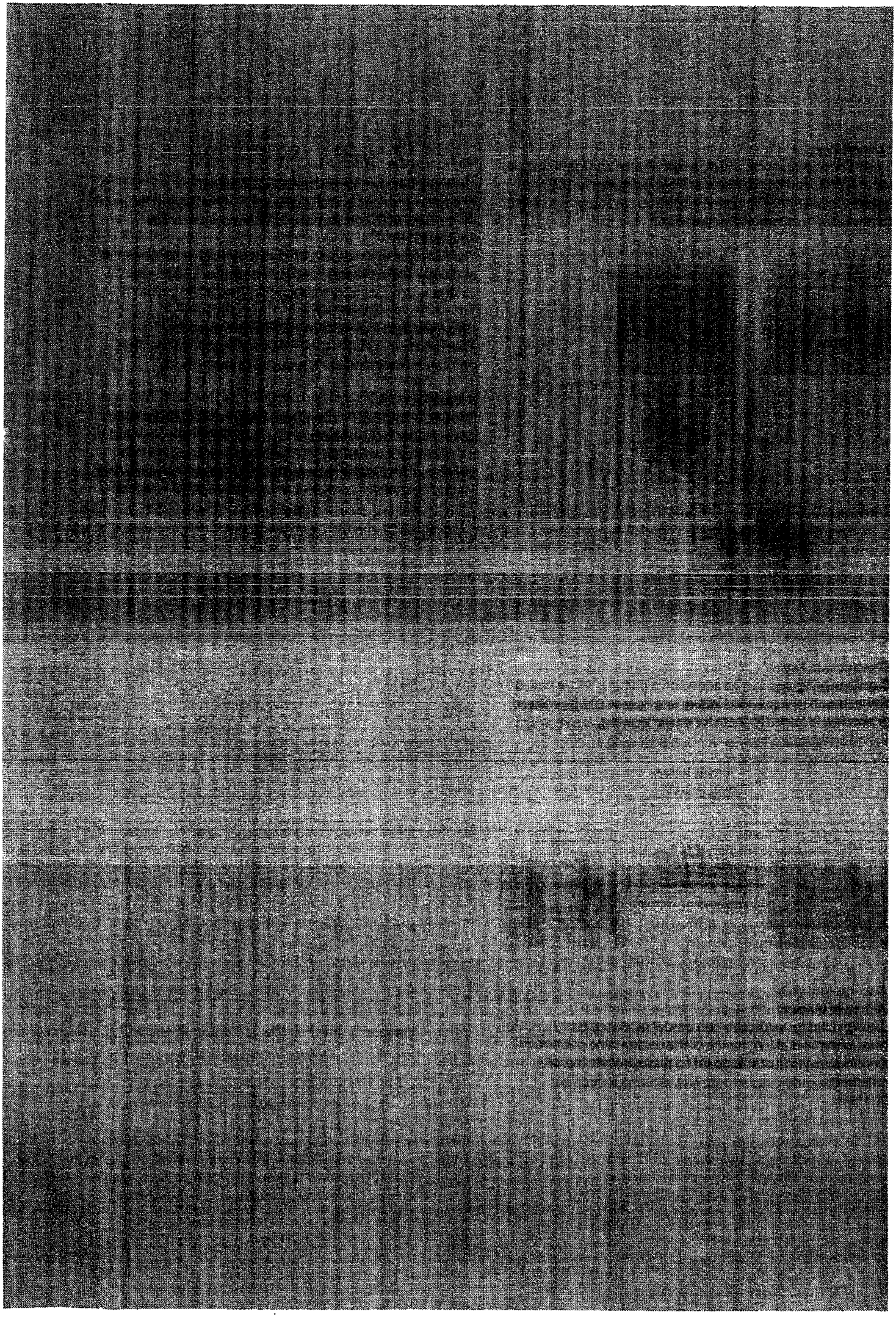
Background color
A built-in background color generator permits color background for keying, for the border of the wipe pattern, etc. Hue, chroma and luminance of the background color are continuously adjustable so that a precise color can be obtained.

"E-File" FUNCTION

Memory of the setting on the SEG-2550/2550P
The setting on the control panel or the operating procedure of the SEG-2550/2550P can be held in the memory of the SEG-2550/2550P.
The data is held for about 24 hours after turning the power off, and also saved on a memory device such as a floppydisk by using a microcomputer through the RS-232C interface.

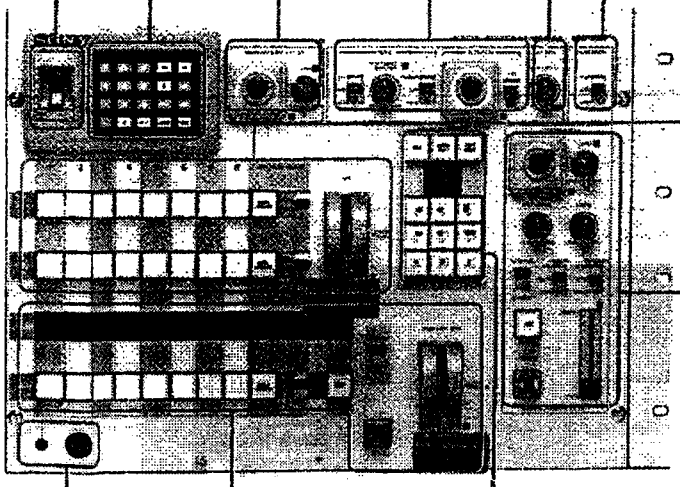
Recall the data memorized in E-File and execution
The data memorized in the E-File can be recalled any time, and can be executed to reproduce the same effect.

Remote control
The SEG-2550/2550P is equipped with an RS-232C interface so that the effects memorized in the E-File can be executed in synchronization with the VTR editing control unit with this interface. The data memorized in the E-File can be saved and loaded by a microcomputer through the RS-232C interface.



OUTLINE OF THE SEG-2550/2550P FUNCTIONS

For details, please refer to the pages indicated by the circled numbers.



[1] POWER switch (45)
The power of the SEG-2550/2550P is turned on and off.

[2] E-File section (45)
The setting and operating procedure of the SEG-2550/2550P is memorized, and the same condition is reproduced.

[3] BACKGROUND COLOR section (46)
Hue, chroma and luminance of the background color are adjusted.

[4] Wipe effects section (47)
The various wipe effects such as pairing, echo, border, softness and positioner, are controlled.

[5] EXT KEY LEVEL control (47)
Adjusts the key signal level for the external key operation.

[6] INDICATION switch (48)
Selects what is to be displayed on the preset monitor.

[7] A bus/B bus select section (48)
Selects pictures used for effects such as mixing, wipe, external key, and executes the effects.

[8] DOWNSTREAM KEYER section (49)
Letters or figures picked up by a black and white video camera or produced by the SMC-70G/70GP microcomputer are added on a picture. The added letters and figures can be colored.

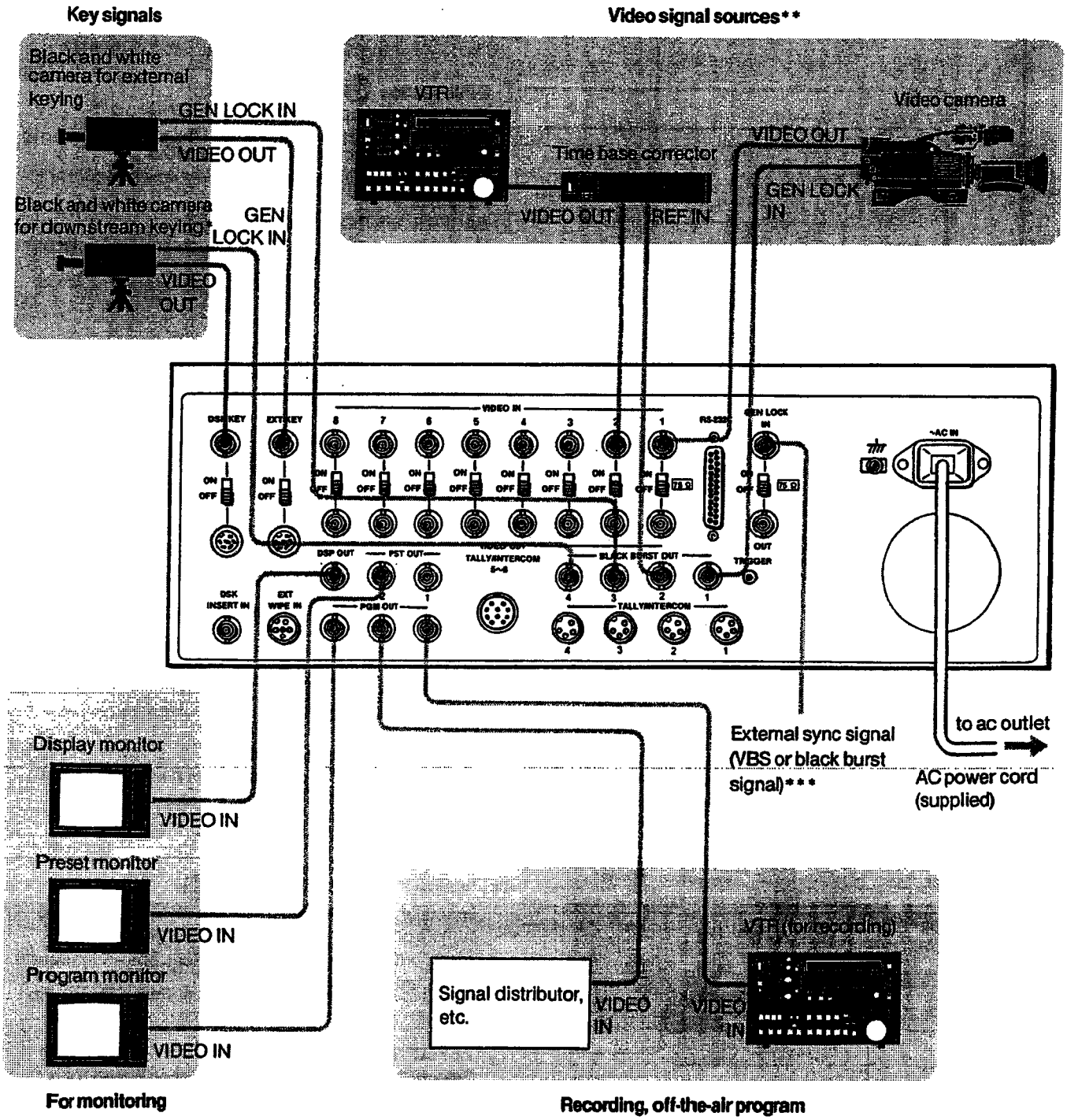
[9] EFFECTS SELECT section (51)
Selects the effects to be executed when EFFECTS is selected with the PGM/PST select block.

[10] PGM/PST select section (52)
Selects the program and preset pictures, and interchanges them by cut.

[11] INTERCOM section (53)
Connect a headset for the intercom system and adjust the volume.

PREPARATIONS

BASIC CONNECTIONS



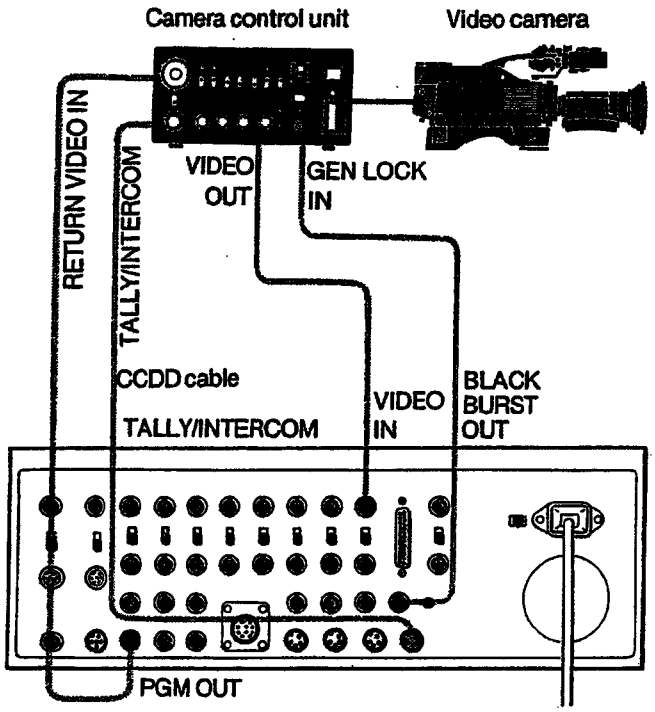
- For connections, the 75-ohm coaxial cables, 3C-2V, 5C-2V or equivalent should be used.

* For downstream keying, an SMC-70G/70GP microcomputer can be used. For the connection of the SMC-70G/70GP, refer to "TO CONNECT AN SMC-70G/70GP AS A DOWNSTREAM KEYER".

** Up to 8 video signal sources can be connected to any of the VIDEO IN 1 to 8 connectors.

*** To operate the SEG-2550/2550P with an external sync system, connect the external sync signal. When an external sync signal is connected, the phase of the output signal of the SEG-2550/2550P should be adjusted to the phase of the external sync signal. Before operating the unit, adjust the phase referring "ADJUSTING THE SC AND H PHASES".

TO CONNECT A CAMERA USING A CAMERA CONTROL UNIT



MONITORS TO BE USED

Display, program and preset monitors show the following pictures.

Display monitor
The data of the E-File and the information for E-File operation are displayed. (For details on E-File, refer to "OPERATION USING "E-File"".)

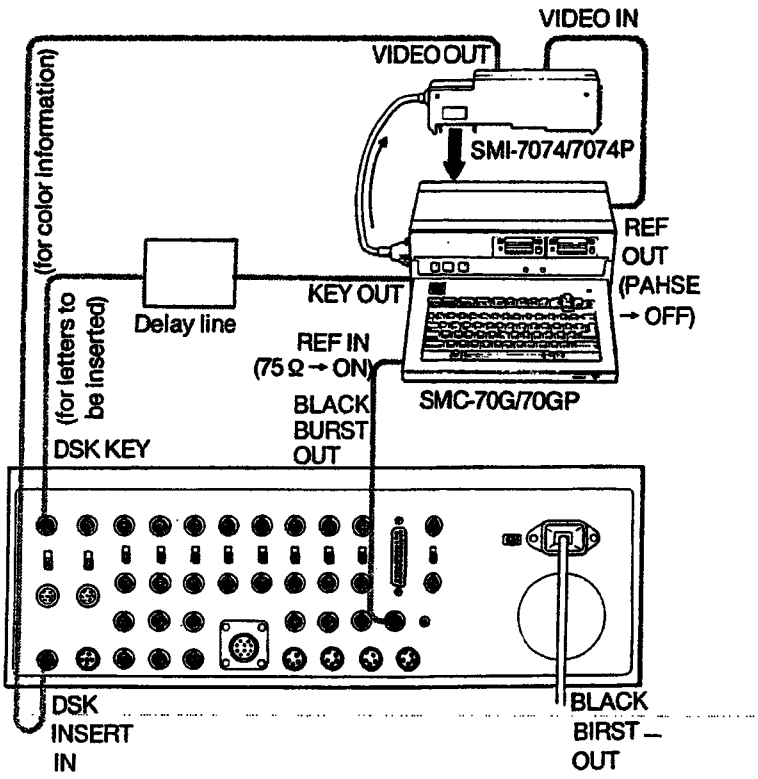
Program monitor
A final picture to be recorded or sent to the next stage (program picture) is displayed.

Preset monitor
The next program picture is displayed. This monitor is used to check the picture or to rehearse the effects.

Note on connection cables
For connections other than tally/intercom, the 75-ohm coaxial cables, 3C-2V, 5C-2V or equivalent should be used.

TO CONNECT AN SMC-70G/70GP FOR DOWNSTREAM KEYER

When an SMC-70G/70GP microcomputer is connected, letters for downstream keyer can be inserted by the SMC-70G/70GP. The SMI-7074 NTSC superimposer or the SMI-7074P PAL superimposer is necessary for the SMC-70G/70GP. The key signal should be delayed by about. 0.5 μsecond using a delay line (available locally). For details, please consult your authorized Sony dealer.

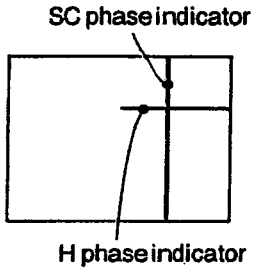


ADJUSTMENTS OF CONNECTED EQUIPMENT

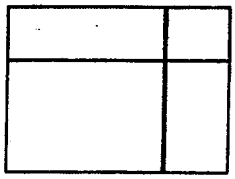
Adjust the phases, video level, hue, chroma level, etc., of the connected cameras and VTRs.

1 Adjust the phases of all equipment as follows.

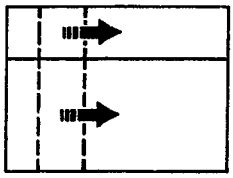
1) Turn the power of all equipment on.
2) Turn the SEG-2550/2550P on.
3) Set the PGM/PST selector to PGM.
4) Set the INDICATION selector to PHASE.
   The phase indication lines will appear on the preset monitor screen.



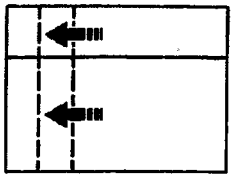
5) Press the 1 button of the PST select buttons.
6) Turn the H phase control on the equipment connected to the VIDEO IN 1 connector so that the left and right H phase indicators appear.



7) Turn the SC phase control on the same equipment so that the SC phase indicator moves to the left; when it reaches the leftmost position, the indicator is split into two lines, the right one moving to the right.



8) Turn the SC phase control so that the right line moves to the left to become one line with the left line.



The adjustment of the phases of the equipment connected to the VIDEO IN 1 connector is finished.

- For the equipment connected to the VIDEO IN 2 through 8 connectors, repeat steps 5), 6), 7) and 8).
- Be sure to adjust the H phase first, then the SC phase.

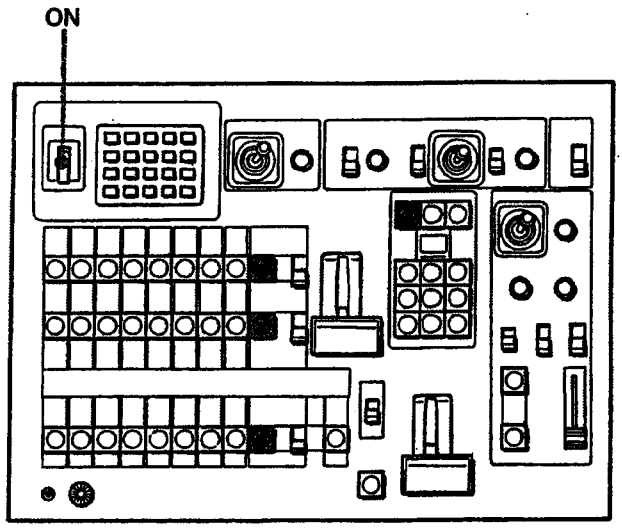
2 Adjust the color of the video monitors.
Use the color bars generated by the video camera or the camera control unit to adjust the hue so that the same color will be obtained on all video monitors.

3 Adjust the level—video output level, pedestal level, chroma level, hue, etc.—of all equipment so that the same level is obtained.

START

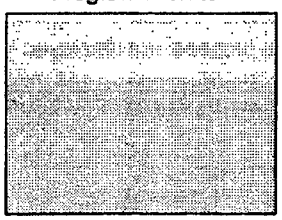
This section introduces the basic operation such as changing a picture by cut, mixing or wipe and inserting a picture into another picture (keying), etc.

Check that the power and equipment to be used are correctly connected, and set the POWER switch to ON. The power is turned on, and the buttons on the operation panel are lit as shown below.



Display monitor

Program monitor



Preset monitor

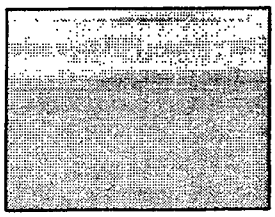


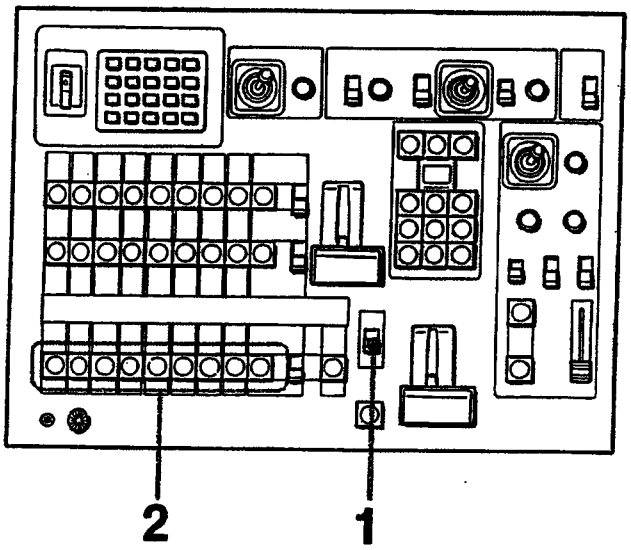
Figure 1 Screens when the power is turned on

CUT

Cut is the method to instantaneously change a picture to the next one. Cut can be executed by pressing a PST bus select button or the TAKE button.

CUT WITH THE PST BUS SELECT BUTTONS

The picture selected by a PST bus select button is displayed on the program and preset monitors, and changed to the next picture simultaneously.



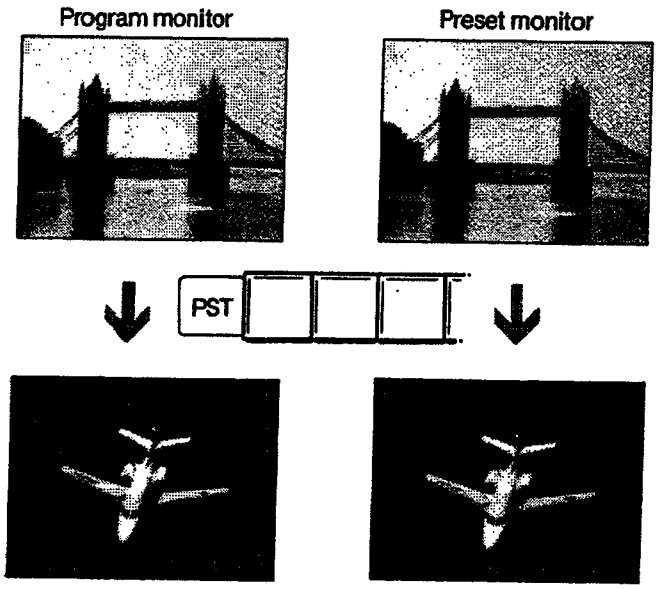


Figure 2 Cut with the PST bus select buttons

1 Set the PGM/PST selector to PGM.

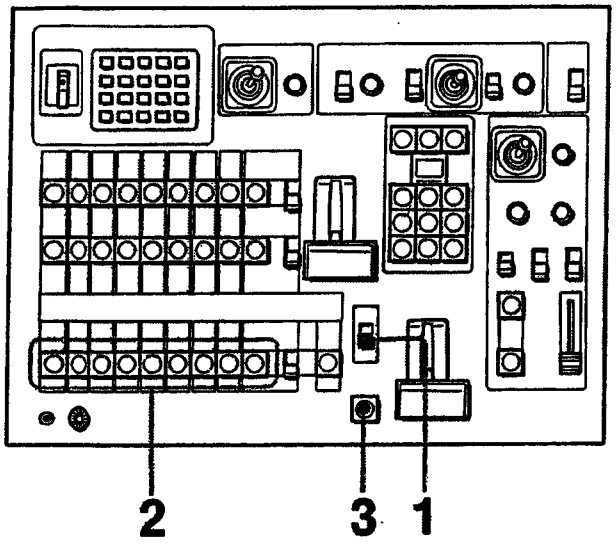
2 Select a desired picture by pressing a PST bus select button.

The pressed button lights, and the figure of the PGM indicators corresponding to the button also lights. The selected picture appears on the program and preset monitors.

Every time a PST bus select button is pressed, the displayed picture changes.

CUT WITH THE TAKE BUTTON

The picture on the preset monitor will be the next program picture. The picture can be checked on the preset monitor.



1 Set the PGM/PST selector to PST.

2 Select a desired picture by pressing a PST bus select button.
The pressed button lights, and the selected picture appears on the preset monitor.

3 Press the TAKE button.
The pictures on the preset monitor and program monitor are interchanged, and the indication of the PGM indicator and the PST bus select button are also changed.

Repeat steps 2 and 3 to continue the cut operation.

- The PGM/PST MIX lever should be set at either end, or the pictures on the preset monitor and program monitor are mixed.

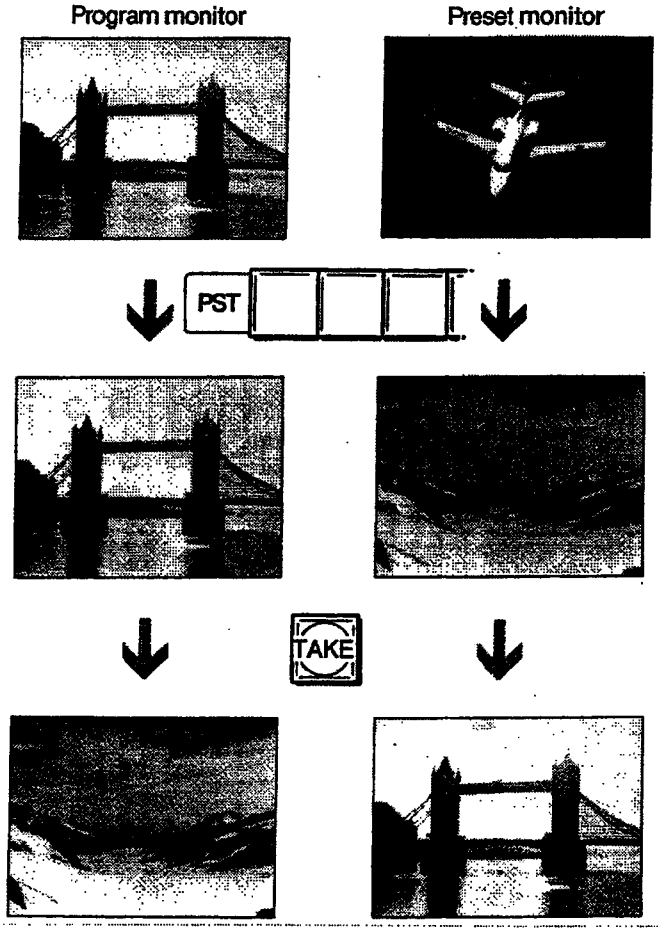


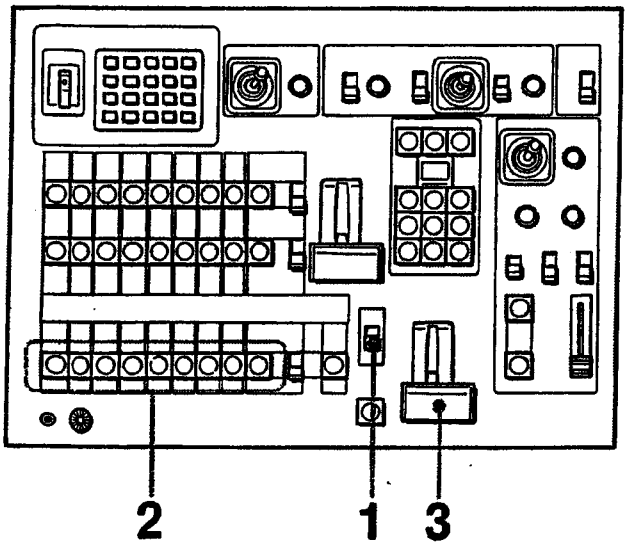
Figure 3 Cut with the TAKE button

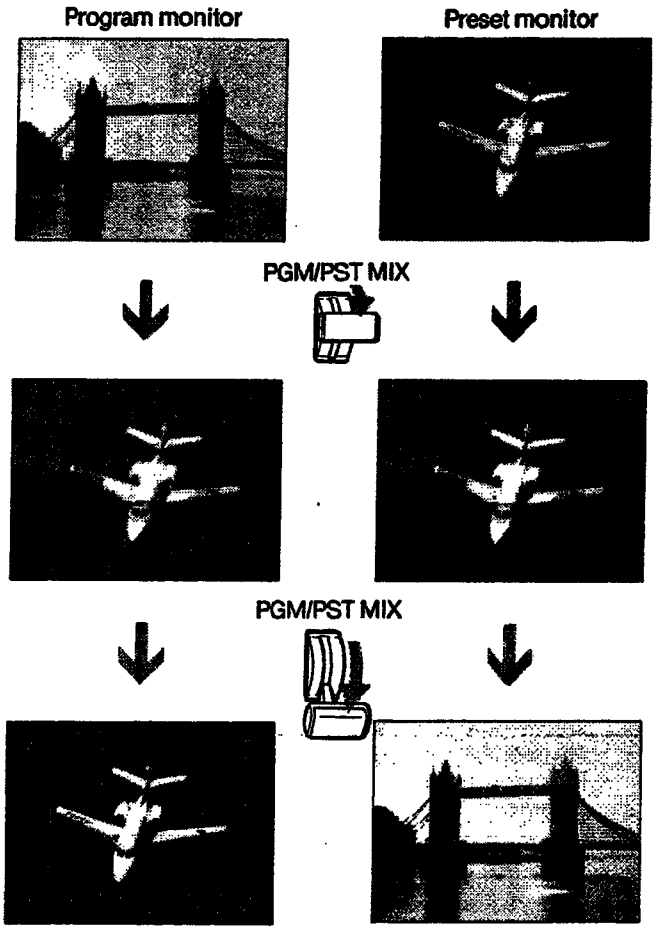
MIXING

Mixing is the effect of slow transition that one picture dissolves into another. Mixing is executed by the PGM/PST MIX lever or by the EFF lever.

MIXING WITH THE PGM/PST MIX LEVER

The program picture is gradually changed to the preset picture.





1 Set the PGM/PST selector to PST.

2 Select a desired picture by pressing a PST bus select button.

The pressed button lights, and the selected picture appears on the preset monitor.

3 Move PGM/PST MIX lever to the other end.

The pictures on the program monitor and preset monitor are mixed and gradually interchanged.

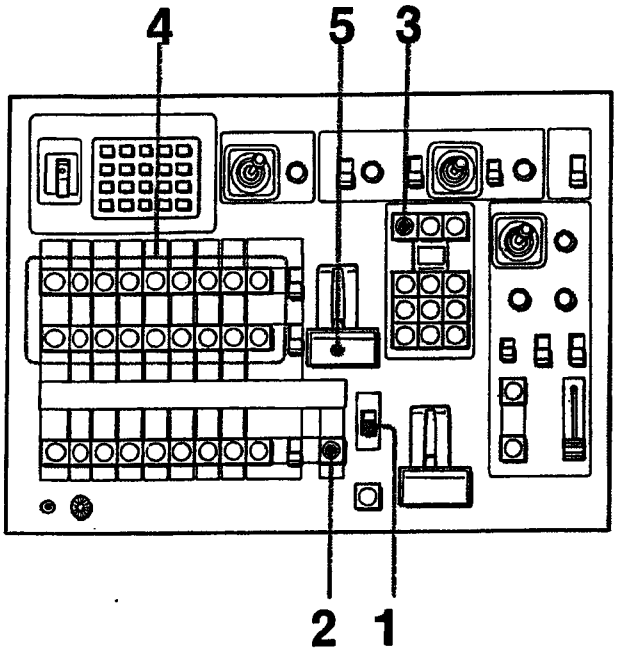
Repeat steps 2 and 3 to continue the mixing operation.

- The uppermost and the lowermost positions of the PGM/PST MIX lever are not assigned to either the program or preset picture. The pictures will be interchanged each time the lever is moved from one position to the other.
- The speed of the interchange depends on how fast the lever is moved.
- When the BACKGROUND button of the PST bus select buttons is pressed, select the color by the BACKGROUND COLOR stick and LUM control. For details, refer to "HOW TO SELECT THE BACKGROUND COLOR".

Figure 4 **Mixing with the PGM/PST MIX lever**

MIXING WITH THE EFF LEVER

The pictures selected by the A bus select buttons and B bus select buttons are gradually interchaged.
Rehearsal can be done on a preset monitor. For details on the rehearsal, refer to "REHEARSAL".



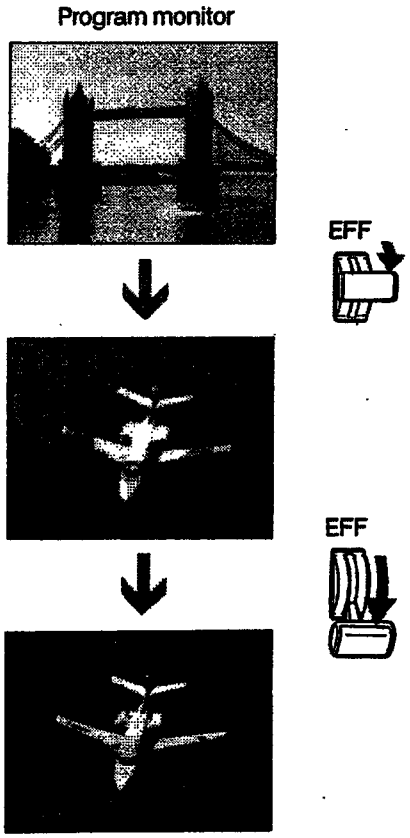


Figure 5 **Mixing with the EFF lever**

1 Set the PGM/PST selector to PGM.

2 Press the EFF button of the PST bus select buttons.
The EFF button and EFFECTS indicator light.

3 Press the MIX button.
The MIX button lights.

4 Select pictures by pressing an A bus select button and a B bus select button.

5 Move the EFF lever to the other end.
The next picture will appear being dissolved into the program picture.

- The button which corresponds to the program picture blinks.
- The speed of the interchange depends on how fast the lever is moved.

REHEARSAL

Before recording or sending the final picture, rehearsal can be done on the preset monitor. Then you can check the effect in advance. To rehearse the effects, proceed as follows.

1 Set the PGM/PST selector to PST.

2 Perform the procedure of the desired effect for rehearsal.
You can check the result of the effect on the preset monitor.

3 After the effect is confirmed, press the TAKE button or move the PGM/PST MIX lever to the other end so that the picture on the preset monitor will become the program picture.

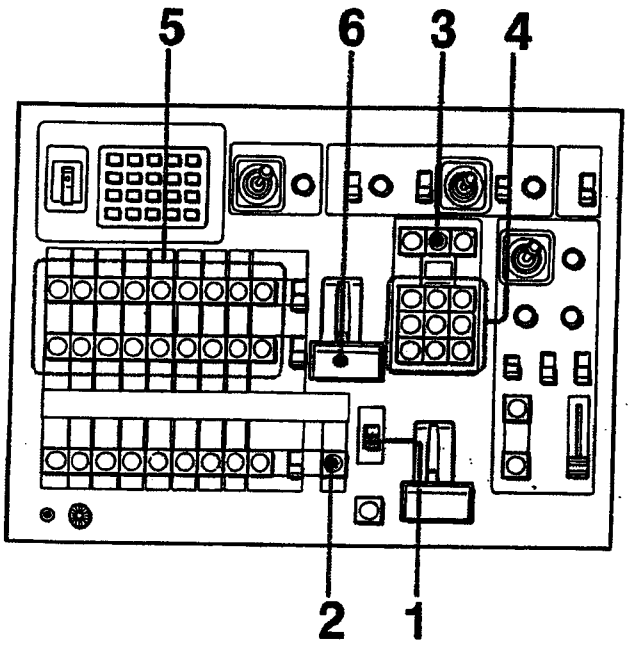
4 Perform the desired effect again (moving the EFF lever, pressing the EXT KEY button, etc.), and the final picture will be supplied from the PGM OUT connector.

WIPE

A wipe is changing one picture to another by revealing the new picture with a geometrical pattern (wipe pattern) moving across the screen. You can select a wipe pattern from 137 patterns. Nine patterns among them can be selected by simply pressing a pattern select button, and the remaining 128 patterns are selected with the pattern codes.

OPERATION USING THE PATTERN SELECT BUTTONS

To select a wipe pattern by simply pressing a wipe pattern select button, proceed as follows.



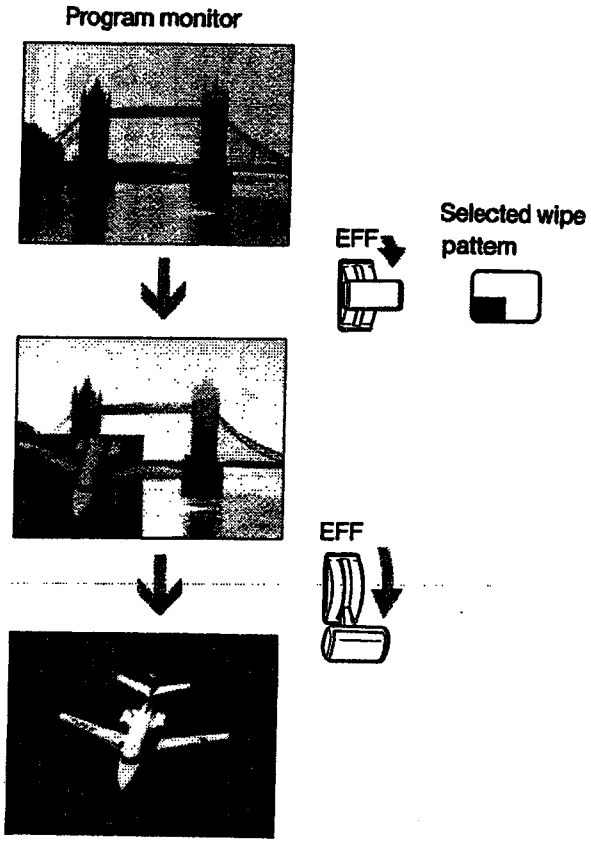


Figure 6 Wipe

1 Set the PGM/PST selector to PGM.

2 Press the EFF button of the PST bus select buttons.
The EFF button and EFFECTS indicator light.

3 Press the WIPE button.
The WIPE button and the upper left button of the wipe pattern select buttons light.

4 Select a desired wipe pattern by pressing a wipe pattern select button.
The pressed button lights.
- To select the pattern with the pattern code, refer to "TO SELECT WIPE PATTERN WITH THE PATTERN CODES".

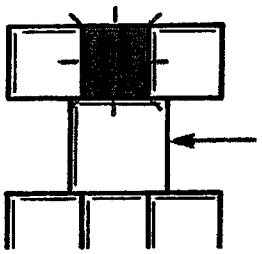
5 Select the pictures by pressing an A bus select button and a B bus select button.

6 Move the EFF lever to the other end.
The program picture will be wiped by the selected wipe pattern.

- The button which corresponds to the program picture blinks.
- The speed of the interchange depends on how fast the lever is moved.

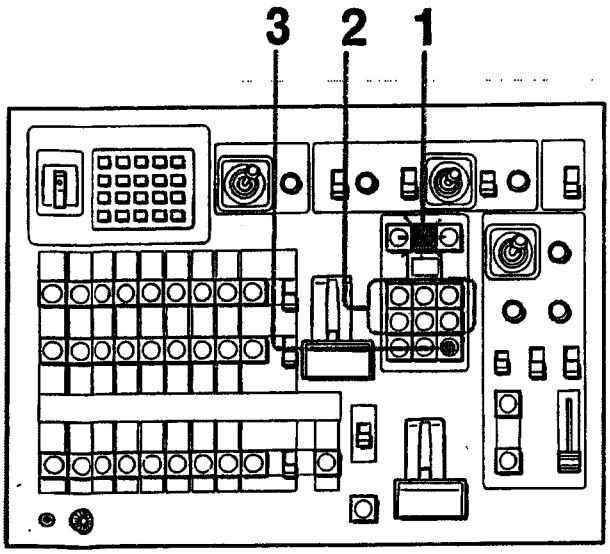
TO SELECT WIPE PATTERNS WITH PATTERN CODES

The desired wipe pattern can be selected by two methods. One is to select the pattern by pressing a pattern code select button. The other is to select the pattern by designating the pattern code. The two methods change cyclically every time the WIPE button is pressed.
When the figure is displayed in the pattern code indication window, a wipe pattern is selected by the pattern code: When the figure is not displayed, a wipe pattern is selected by pressing a wipe pattern select button. The wipe pattern and the pattern code are shown in "TABLE OF WIPE PATTERNS" at the end of this manual, or the supplied WIPE PATTERN LIST.



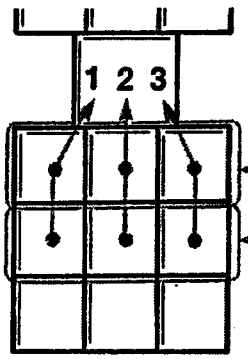
When a figure is displayed:
Selection with the pattern code
When a figure is not displayed:
Selection with a wipe pattern select button

To select a desired wipe pattern with the pattern code, proceed as follows. The other operating procedure is the same as that using the wipe pattern select buttons.



1 Press the WIPE button until the figures appear in the pattern code indication window.
The M button at the right lower end of the wipe pattern select buttons lights.

2 Press the upper two-row buttons of the wipe select buttons until the desired pattern code appears in the window.
The M button starts blinking.
Three buttons of each row correspond to right, center and left digits in the window.



Press these buttons to increase the figure.
Press these buttons to decrease the figure.

3 Press the M button.
Blinking of the M button stops, and the designated pattern is selected.

- When the figure which has not the corresponding wipe pattern is designated, the M button remains blinking, and the wipe pattern cannot be selected.

Note on wipe patterns of pattern code 300 to 307

When the wipe patterns of pattern code 300 to 307 (mosaic wipe) are selected and the unit is remotely controlled by external equipment such as an BVE-900, it is not possible to wipe at the speed of 8 frames or faster.

SOFTNESS (to soften the wipe pattern edge)

The wipe pattern edge can be softened. The softness can be adjusted with the SOFTNESS/BORDER control.

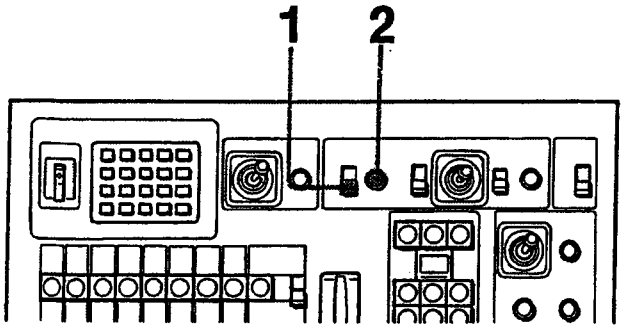


Figure 7 **Softness of wipe pattern edge**

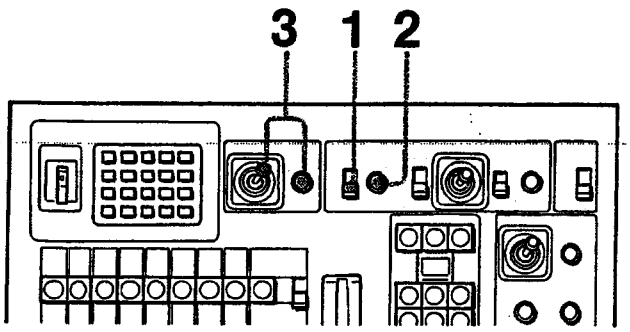
1 Set the SOFT/HARD/BDR selector to SOFT.

2 Turn the SOFTNESS/BORDER control to adjust the softness.

- To obtain the hard edge, set the selector to HARD.

BORDER (to add a border to the wipe pattern edge)

You can border the wipe pattern edge, and color the border.



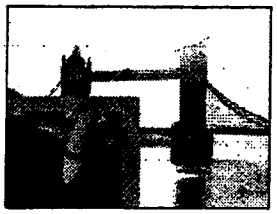


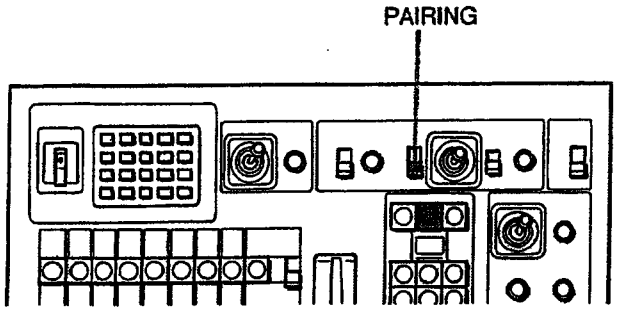
Figure 8 **Bordered wipe pattern edge**

1 Set the SOFT/HARD/BDR selector to BDR.
The edge of the wipe pattern is bordered.

2 Turn the SOFTNESS/BORDER control to adjust the width of the border.

3 Adjust the color of the border by the BACKGROUND COLOR stick and the LUM control.
The adjusting method is the same as the background color, and the color will be the complementary color of the background color. For details, refer to "HOW TO SELECT THE BACKGROUND COLOR".

PAIRING WIPE (to wipe the picture in a grill format)



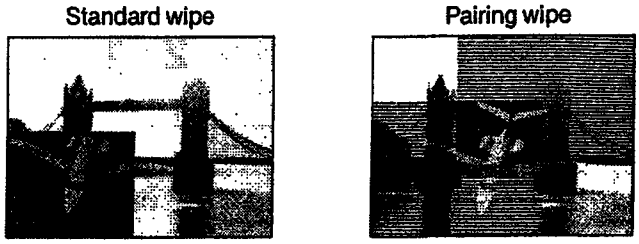
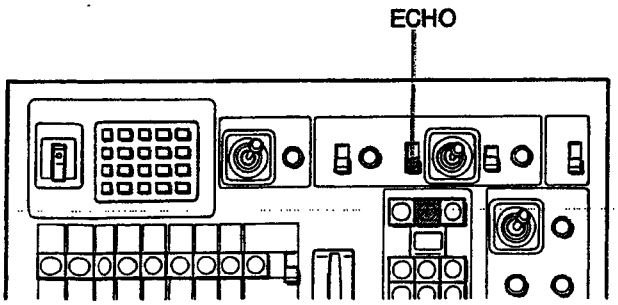


Figure 9 Pairing wipe

In the pairing wipe, the wipe operation is performed in a grill format from opposite ends of the screen. In other words, pairs of scanning lines wipe the picture alternately from either end. To perform pairing wipe, set the PAIRING/ECHO selector to PAIRING.

- The pairing wipe is valid with some patterns. Please refer to "TABLE OF WIPE PATTERNS" for the patterns in which pairing wipe is available.

ECHO WIPE (to wipe the picture gradually)



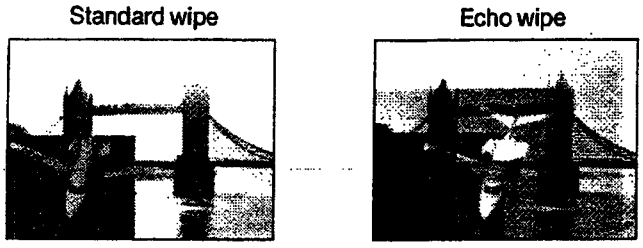


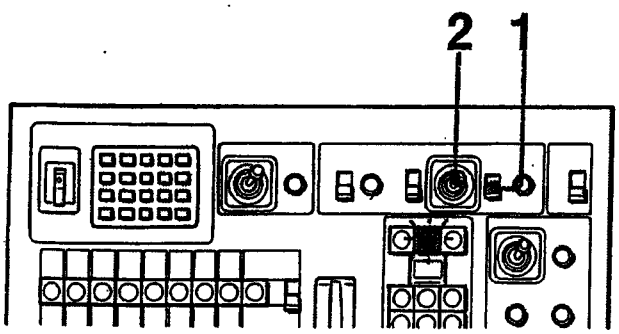
Figure 10 Echo wipe

ı the echo wipe, the new picture will be overlapped on the ıriginal picture in several steps of gradation at the wipe ıattern edge.
o perform echo wipe, set the PAIRING/ECHO selector to :CHO.

The echo wipe is valid with some patterns. Please refer to "TABLE OF WIPE PATTERNS" for the patterns in which echo wipe is available.

POSITIONER (to position the wipe pattern)

You can set the center of the wipe pattern to any position on the screen by maneuvering the POSITION stick.



Standard position

Center of the pattern move

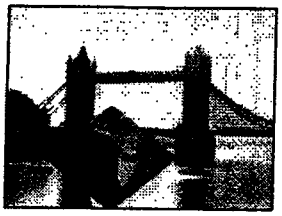


Figure 11 **Wipe with positioner**

1 Set the POSITION switch to ON.

2 Maneuver the POSITION stick so that the center of the wipe pattern is settled at the desired position.

- The positioning control is valid with only a few patterns. Please refer to "TABLE OF WIPE PATTERNS" for the patterns whose position can be changed.

EXTERNAL KEY

A part of one picture is cut out, and another picture is inserted into the cut-out part. The part to be cut out is designated by the picture picked up by a black and white camera connected to the EXT KEY connector. This is called "external keying". The signal picked up by the black and white camera is called a key signal.

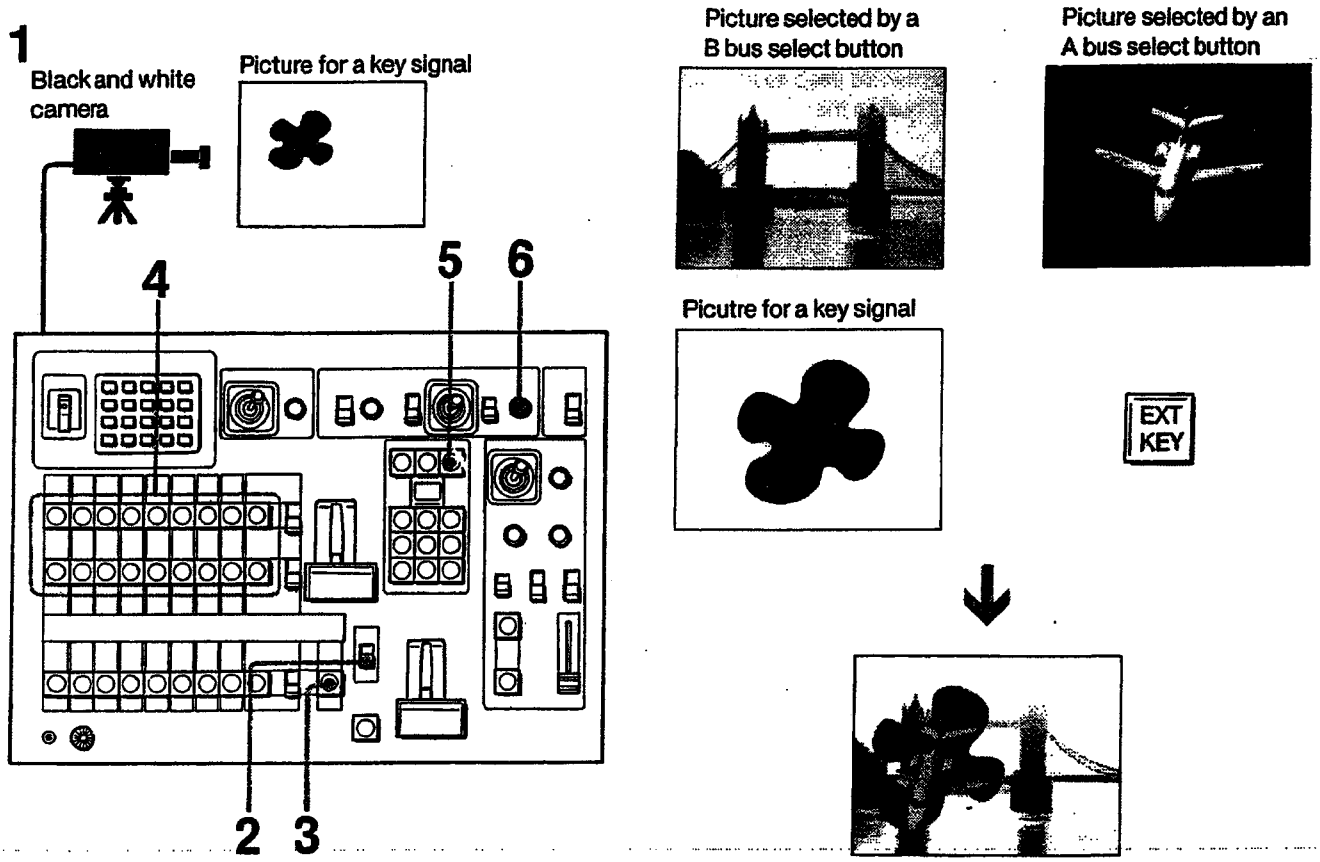


Figure 12 External key

1 Pick up the pattern for an external key signal, and adjust the focus, size and position.

2 Set the PGM/PST selector to PGM.

3 Press the EFF button of the PST select buttons.
The EFF button and the EFFECTS indicator will light.

4 Select the pictures by pressing an A bus select button and a B bus select button.

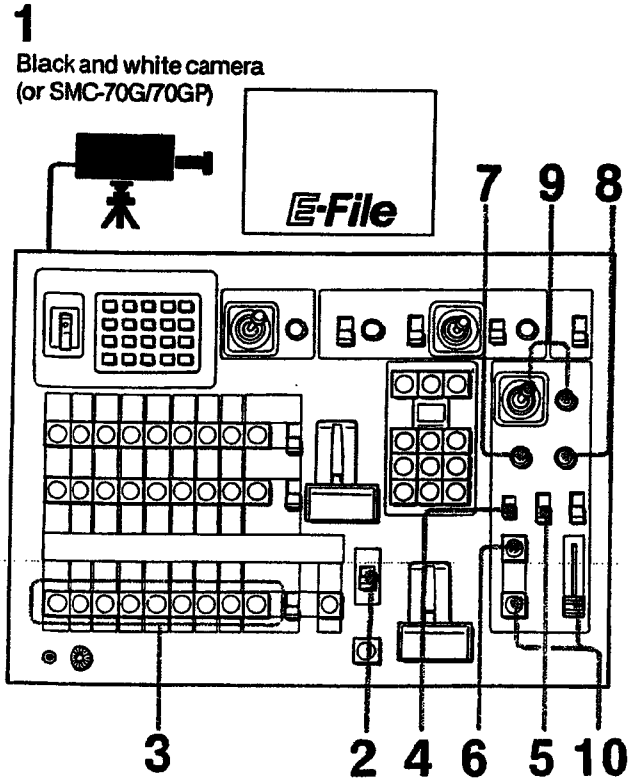
5 Press the EXT KEY button.
The picture selected by a A bus select button is inserted into the picture on the program monitor.

6 Turn the EXT KEY LEVEL control until the outline of the inserted picture will be clear.
If necessary, adjust the size and position of the inserted picture.

DOWNSTREAM KEYER

The captions or figures can be inserted into the picture. This is called "downstream keying". The captions and figures are picked up by a black and white camera connected to the DSK KEY connector, and are colored by the built-in color matte generator.
The characters from an SMC-70G/70GP microcomputer is also inserted into the picture by the downstream keyer. In this case an SMI-7074 NTSC superimposer or a SMI-7074P PAL superimposer is necessary on the SMC-70G/70GP. The character color of the SMC-70G/70GP can be used as it is, or selected by the color matte generator built-in the SEG-2550/2550P.

OPERATION



1 Pick up the captions and characters by a black and white camera, and adjust the focus, size and inserted position. When the SMC-70G/70GP is used, prepare the SMC-70G/70GP. For details, refer to the instruction manuals furnished with the related devices and software.

2 Set the PGM/PST selector to PGM.

3 Select a picture on which the captions are to be inserted by pressing a PST bus select button.
The pressed button lights.

4 Set the NORMAL/INVERT selector as follows :
When black characters on a white paper are inserted : NORMAL
When white characters on a black paper are inserted : INVERT

Figure 13 **Setting of the NORMAL/INVERT selector**

5 Set the INSERT switch as follows to designate the color of the inserted characters.
Monochrome characters : B/W
Colored by the color matte generator : CM
Color from the SMC-70G/70GP as it is : EXT

6 Press the PST CUT IN/OUT button.
The button will light, and the characters are added on the picture on the preset monitor.
If necessary, adjust the size and position of the inserted characters.

7 Turn the KEY LEVEL control so that the inserted characters will be clear.

8 Turn the EDGE control so that the flicker at the edge of the characters will stop.
This step is not necessary for the characters from the SMC-70G/70GP.

9 Adjust the color with the COLOR MATTE stick and LUM control when the CM is selected in step 5.
The adjusting method is the same as that of the background color. Refer to "HOW TO SELECT THE BACKGROUND COLOR"

) Insert the characters into the program picture with the PGM CUT IN/OUT button or INSERT lever.

To insert the characters instantaneously (Cut in)
Press the PGM CUT IN/OUT button. The button lights, and the characters are instantaneously inserted into the picture.

To insert the characters gradually (Fade in)
Move the INSERT lever from the PGM position to the INSERT position. When the lever is started to move, the PGM CUT IN/OUT button lights.

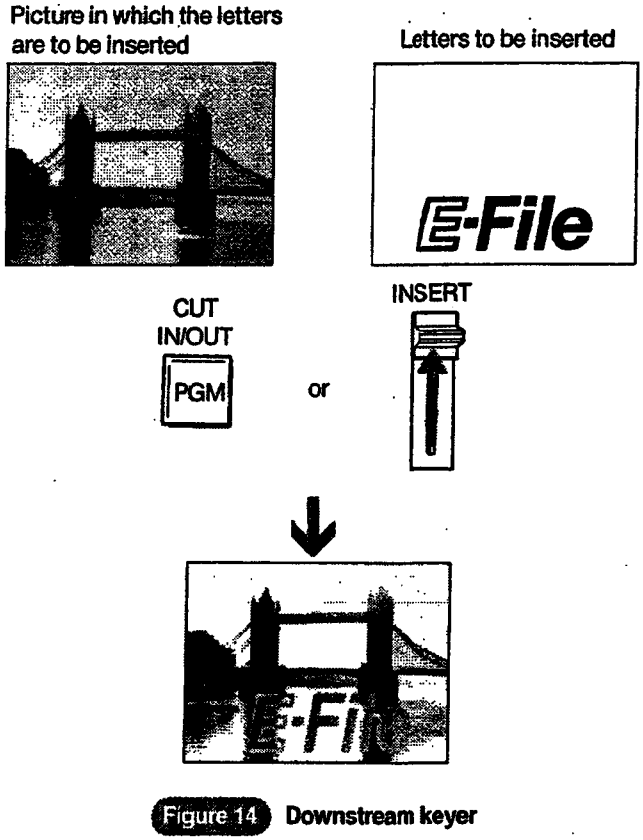


Figure 14 Downstream keyer

TO DELETE THE INSERTED LETTERS

› delete the inserted letters on the preset monitor
ress the PST CUT IN/OUT button. The added letters sappear and the button will go out.

› delete the inserted letters on the program monitor

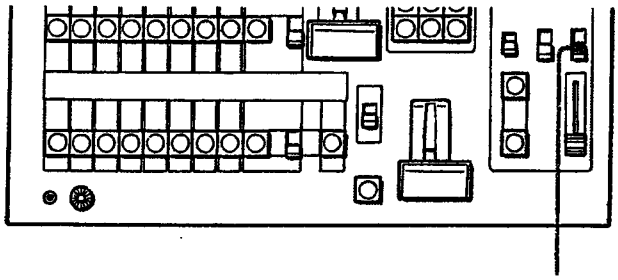
› delete instantaneously (Cut out)
ess the PGM CUT IN/OUT button. The inserted letters sappear and the button goes out.

› delete gradually (Fade out)
ove the INSERT lever from the INSERT position to the PGM sition. At the PGM position, the PGM CUT IN/OUT button es out.

TO ADD SHADOW TO THE INSERTED LETTERS

The addition of shadows to the inserted letters may make the display of letters more effective, especially when inserting white letters or figures into a light picture.
Set the SHADOW selector as follows.

To add a wide shadow : WIDE
To add a narrow shadow : NARW
No shadow : OFF

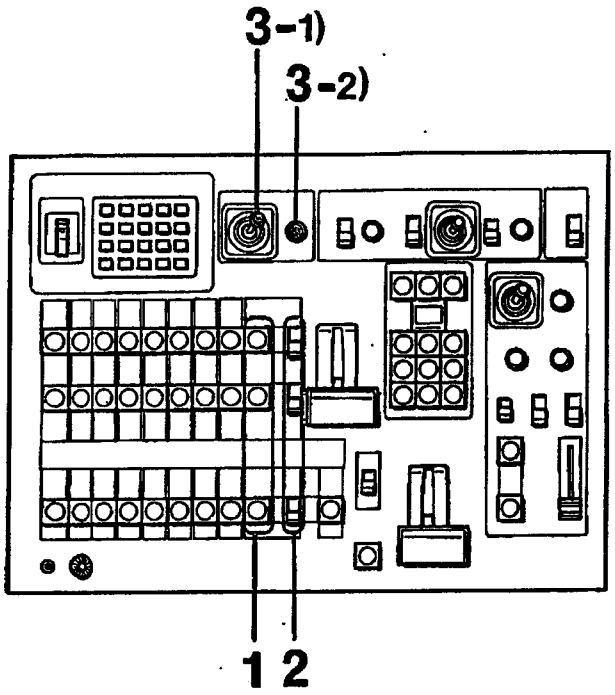


SHADOW
select

Figure 15 **Shadow effects**

HOW TO SELECT THE BACKGROUND COLOR

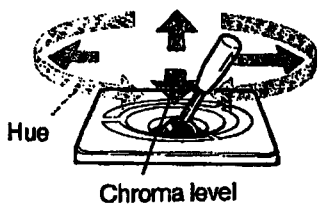
When the BACKGROUND button of the PST bus select buttons, A bus select buttons or B bus select buttons is pressed, the screen will be white, black or colored instead that the picture is displayed. This is called background. The color of the background is selected as follows:



1 Press the BACKGROUND button.
The button lights.

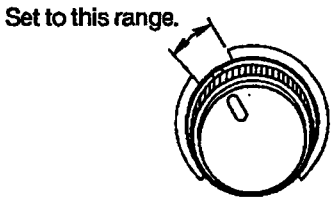
2 Set the BACKGROUND selector as follows:
For a white background: WHT
For a colored background: COL
For a black background: BLK

3 When COL is selected in step 2, adjust the color as follows:
1) Adjust the hue and chroma level with the BACKGROUND stick.
To adjust hue: Turn the BACKGROUND stick.
To adjust the chroma level: Tilt the BACKGROUND stick.



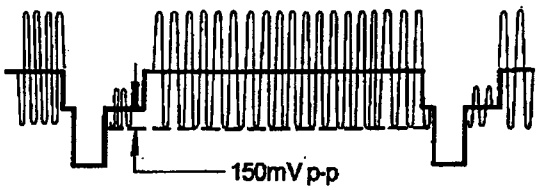
2) Adjust the luminance by turning the LUM control. Normally set the control within the range illustrated below.

- To set the LUM control outside the indicated range, be sure to monitor the waveform with a waveform monitor.



CAUTION

When using highly saturated color matting, check (on a waveform monitor) that the chroma level does not fall below the value shown in the illustration below. If the LUM control is turned counterclockwise with the chroma level high, picture fluctuation may occur on the equipment connected to the SEG-2550/2550P.



APPLICATIONS

EXAMPLES OF VARIOUS EFFECTS

The following example shows how to use the effects in producing a program.

Example 1

1 Title screen is made by designating the color with the background color and by inserting the title with the downstream keyer.

2 Change the background color to another picture by mixing.

3 Delete the title with the fade-out of downstream keyer.

4 Insert a picture in the displayed picture with external key. (For example to display the current scene and the previous scene simultaneously.)

Example 2

1 In a part of a picture, insert a picture by wipe with positioner.

2 Remain the inserted picture in step 1, change the original picture to background color by cut.

3 Insert the end title into the picture in step 2 with the fade- in of downstream keyer.

4 Fade out to black background by mixing.

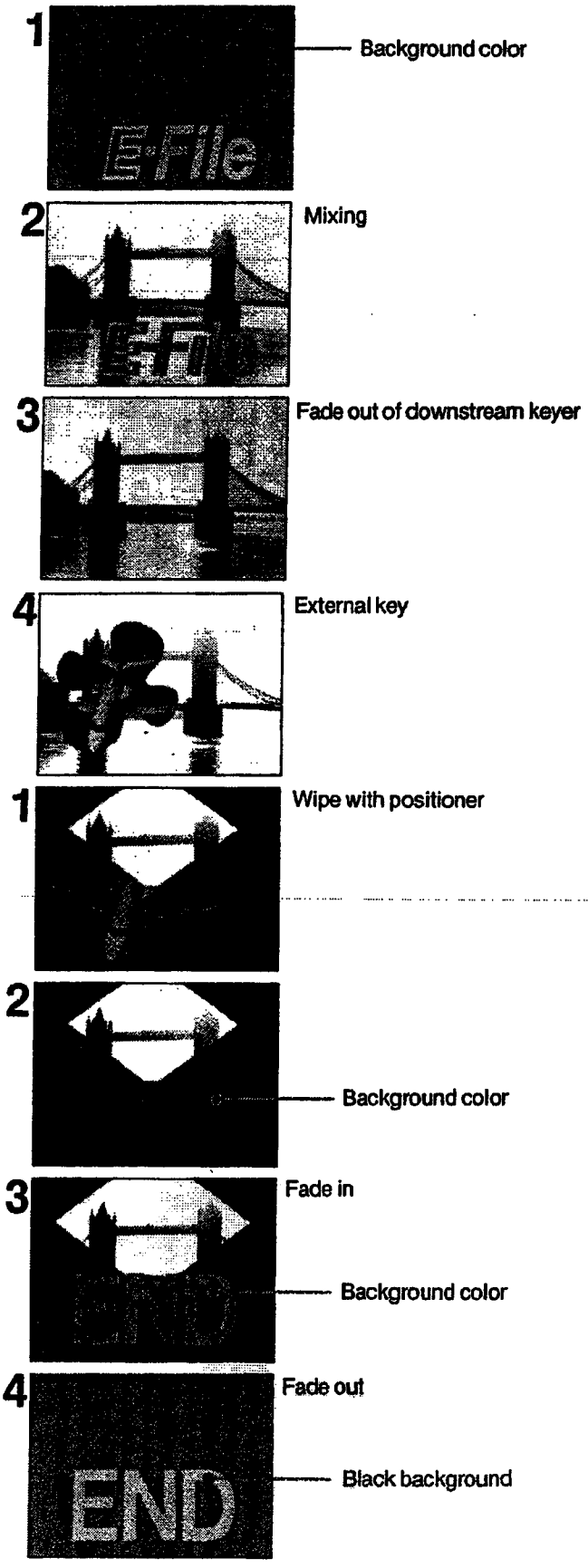
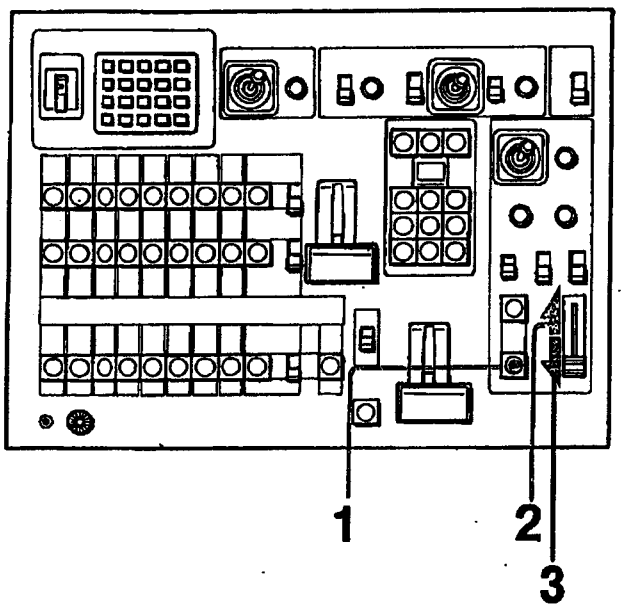


Figure 16 Examples of effects

COMBINATION USE OF PGM CUT IN/OUT BUTTON AND INSERT LEVER

In downstream keyer, the letters are instantaneously inserted (Cut-in) or deleted (Cut-out) every time the PGM CUT IN/OUT button is pressed. While with the INSERT lever, the letters are gradually added (Fade-in) or deleted (Fade-out) when it is moved from one end to the other.
The combination use of the PGM CUT IN/OUT button and INSERT lever makes it possible to obtain such effects as Cut-in/Fade-out or Fade-in/Cut-out.

Cut-in/Fade-out

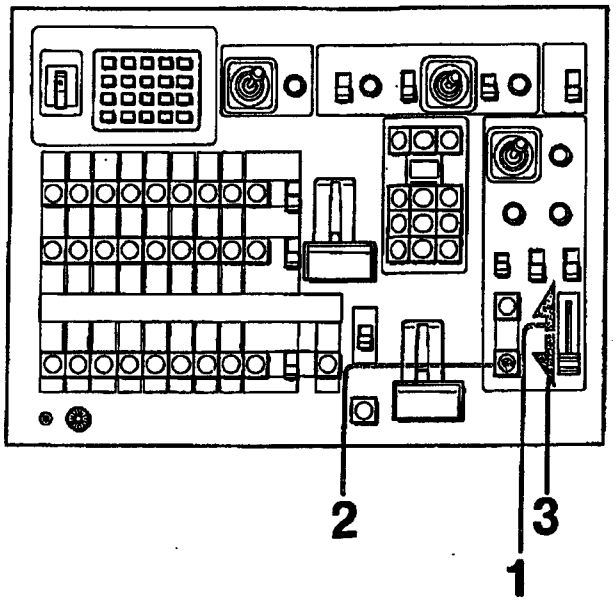


Press the PGM CUT IN/OUT button.
The button lights, and the letters are instataneously inserted into the picture. (Cut-in)

Move the INSERT lever from the PGM position to the INSERT position.
The picture does not change.

Move the INSERT lever from the INSERT position to the PGM position.
The inserted letters are gradually deleted from the picture. At the PGM position, the letters completely disappear and the PGM CUT IN/OUT button goes out. (Fade-out)

Fade-in/Cut-out



1 Move the INSERT lever from the PGM position to the INSERT position.
The letters are gradually inserted into the picture. At the INSERT position, the PGM CUT IN/OUT button lights. (Fade-in)

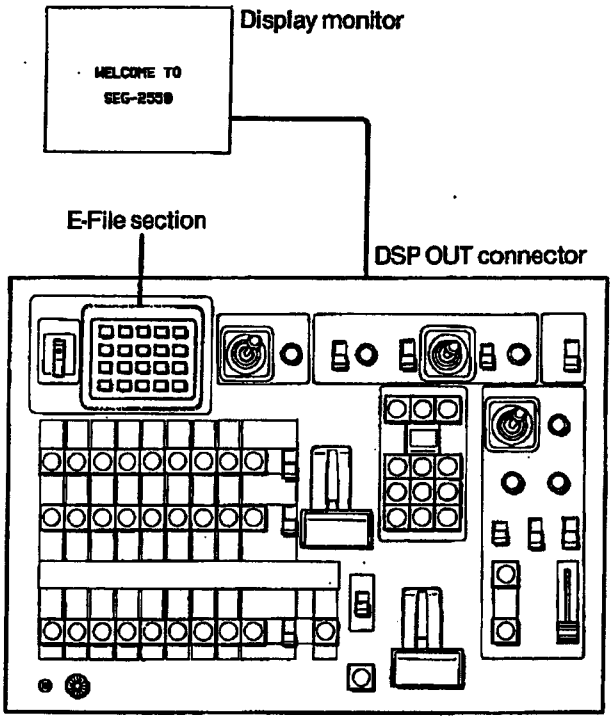
2 Press the PGM CUT IN/OUT button.
The inserted letters are instantaneously deleted from the picture, and the button goes out. (Cut-out)

3 Move the INSERT lever to the PGM position.
The picture does not change.

WHAT IS "E-File"?

The SEG-2550/2550P can memorize the setting of switches and buttons and the movement of the controls, levers and sticks. The settings and movement can easily be reproduced. In this section, how to memorize the effects, and how to recall and execute the memorized effects, etc. are explained.

Each effect, such as cut, wipe, etc. to be executed is called an event. The SEG-2550/2550P memorizes the setting of buttons and switches and movement of levers and sticks (this is called transition) event by event.
The memory of events is called "E-File (Event-file)". The E-File is composed of two memories, the event memory and the transition memory. The event memory can memorize up to 63 events, and the transition memory can memorize 4 through 6 minutes of transition period. The transition period is the total period required to execute all memorized lever and stick operations. The limit of the period differs depending upon the levers or sticks to be operated. When either of the event or transition memory is full, the event cannot be memorized.
The events memorized in the E-File can be recalled at any time and be executed by the TAKE button. Instead of the TAKE button, execution can be remotely controlled by a microcomputer or a VTR editing control unit through the RS-232C interface.
The operation of E-File will be done by the keys in the E-File section.



)ISPLAY OF E-File DATA

'or the E-File operation, connect a monitor to DSP OUT onnector to display the data of the E-File (this is called a isplay monitor). The data of the E-File can also be displayed n the preset monitor by setting the INDICATION selector to 'SP. (On the preset monitor, some mode cannot be isplayed. So the use of the display monitor is :commended.)
/hen the power is turned on, "WELCOME TO SEG-2550" is isplayed on the display monitor. To display the data of the -File, press the C key of the E-File section. (The E-File data is isplayed approximately 10 seconds after the unit power is rned on.) The data of an E-File is composed of three pages.) change the displayed page, press the ↓ key. Every time the ey is pressed, the following page is displayed, and at page the display is returned to page 1.
ree events are displayed at a time. To display the event hich is not displayed, press the ← key or → key.

Before the SEG-2550/2550P is operated for the first time or if it has been turned off for a long time, wrong data may exist in the E-File memory.
Be sure to erase all events before E-File operation. (Refer to "TO ERASE DATA.")

DATA ON PAGE 1

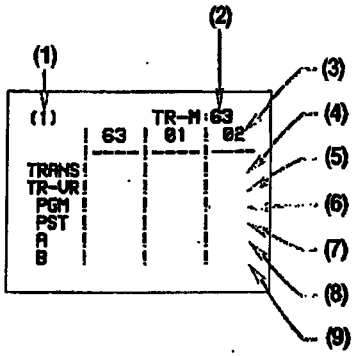


Figure 17 Data on page 1

(1) Page number

(2) Remained transition memory

(3) Event number

(4) Transition time in frame numbers

(5) TR-VR (levers and sticks used in the event)
P/P: PGM/PST MIX lever
EFF: EFF lever
DSK: INSERT lever
POS: POSITION stick
BG-C: BACKGROUND COLOR stick
BG-Y: LUM contorol of BACKGROUND COLOR
CM-C: COLOR MATTE stick
CM-Y: LUM control of COLOR MATTE
B/S: SOFTNESS/BORDER control

(6) PGM (picture selected on the program bus)
(7) PST (picture selected on the preset bus)
EFF: The EFF button of the PST bus select buttons is pressed.
1-8: The button of the PST bus select buttons corresponding to the indicated number is pressed.
WHT: The BACKGROUND selector of the PST bus select section is set to WHT.
COL: The BACKGROUND selector of the PST bus select section is set to COL.
BLK: The BACKGROUND selector of the PST bus select section is set to BLK.

(8) A (picture selected on the A bus)
(9) B (picture selected on the B bus)
1-8: The button of the A bus or B bus select buttons corresponding to the indicated number is pressed.
WHT: The BACKGROUND selector of the A bus or B bus select section is set to WHT.
COL: The BACKGROUND selector of the A bus or B bus select section is set to COL.
BLK: The BACKGROUND selector of the A bus or B bus select section is set to BLK.

DATA ON PAGE 2

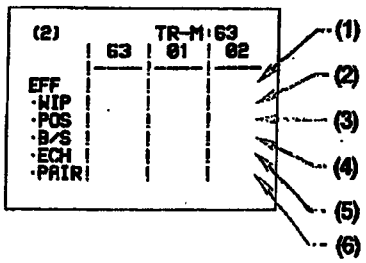


Figure 18 Data on page 2

The data of the mixing, wipe and external key is displayed.

(1) EFF (effect to be used)
WIP: The wipe is selected.
MIX: The mixing is selected.
EXT: The external key is selected.

(2) WIP (pattern code of wipe pattern)
000–307: Pattern code of the selected wipe pattern.

(3) POS (setting of the POSITION switch)
ON: The POSITION switch is set to ON.

(4) B/S (setting of the SOFT/HARD/BDR selector)
BDR: The SOFT/HARD/BDR selector is set to BDR.
SOFT: The SOFT/HARD/BDR selector is set to SOFT.

(5) ECH (setting of the PAIRING/ECHO selector)
ON: The PAIRING/ECHO selector is set to ECHO.

(6) PAIR (setting of the PAIRING/ECHO selector)
ON: The PAIRING/ECHO selector is set to PAIRING.

DATA ON PAGE 3

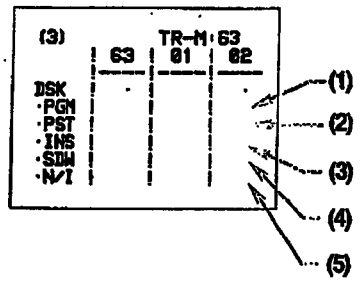


Figure 19 Data on page 3

The data of downstream keyer is displayed.

(1) PGM (condition of the program line)
(2) PST (condition of the preset line)
ON: The letters are inserted into the picture of the program or preset bus by downstream keyer.

(3) INS (setting of the INSERT selector)
COL: The INSERT selector is set to COL.
B/W: The INSERT selector is set to B/W.
EXT: The INSERT selector is set to EXT.

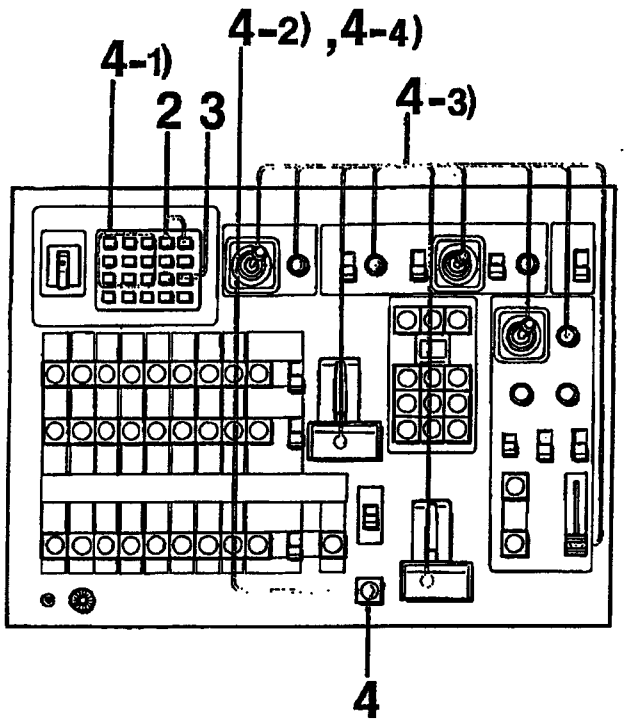
(4) SDW (setting of the SHADOW selector)
WIDE: The SHADOW selector is set to WIDE.
NARW: The SHADOW selector is set to NARW.

(5) N/I (setting of the NORMAL/INVERT selector)
NORM: The NORMAL/INVERT selector is set to NORMAL.
INVT: The NORMAL/INVERT selector is set to INVERT.

TO STORE THE DATA IN MEMORY (Min)

To memorize the setting of buttons or switches and the transition of the levers and sticks, proceed as follows.

OPERATION



This figure blinks, and the data is entered in this column.

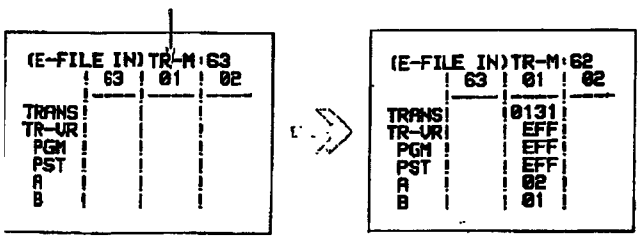


Figure 20 **Data entry**

1 Set the switches and buttons on the SEG-2550/2550P to the condition to be memorized.

2 Place the event number in which the data is to be memorized at the center by pressing the ← key or the → key.

3 Press the Min key.
The event number at the center on the screen starts blinking, and the TAKE button also starts blinking.

4 Execute the effect to be memorized as follows:
Cut
Press the TAKE button, and all of the data set on the panel is automatically memorized at a time.
Transition
1) Designate the lever or stick to be used by the corresponding number, 0 through 9. The numbers of sticks or levers are printed on the control panel.
To use the PGM/PST MIX lever: 0
To use the EFF lever: 1
To use the INSERT lever: 3
To use the POSITION stick: 4
To use the BACKGROUND COLOR stick: 5
To use the LUM control of BACKGROUND COLOR: 6
To use the COLOR MATTE stick: 7
To use the LUM control of COLOR MATTE: 8
To use the SOFTNESS/BORDER control: 9
2) Press the TAKE button.
Memorizing the movement of the designated lever or stick starts
3) Move the stick or lever designated in step 1).
4) Press the TAKE button again at the end of operation.
Memorizing the data is terminated. The period from step 2) through 4) is also memorized in frame numbers and displayed in "TRANS".

The data of an event is memorized. Repeat steps 1 through 4 to memorize the data more.

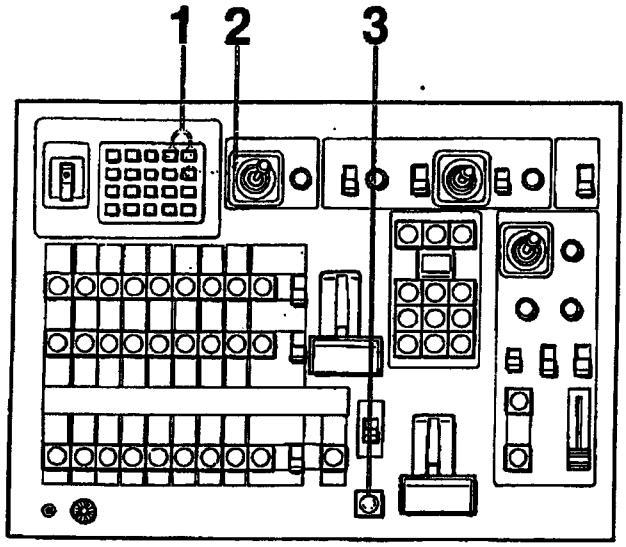
Notes on data entry

- The event number can be automatically increased by one. Refer to "MODE SETTING".
- In the file in which the data has been memorized, the data cannot be entered. To enter new data, erase the memorized data, and enter the new data. For details on erasing data, refer to "TO ERASE DATA".
- When the transition memory is full, the indication of TR-M will be FULL, and new data cannot be entered. To enter the data, store the memorized data on a memory device such as a floppydisk by a microcomputer, and erase the data memorized in E-file.
- Even if the TR-M indication is FULL, certain special effects unrelated to the transition memory (such as CUT) can be memorized, if the event memory is not full.
- The transition memory and the event memory are separate. Transitions are memorized in the order in which they are executed regardless of the event number sequence. If an event number (except for the last in a transition memory map) is cancelled, its space will not be saved. No other event number may be substituted in the cancelled event number's space.

TO RECALL AND EXECUTE THE MEMORIZED DATA (MR)

The data memorized in the E-File can be recalled and be executed.

OPERATION




```
(E-FILE OUT)
      ! 63 ! 01 ! 02
      !----!----!----
TRANS!    !0131!0003
TR-VR!    ! EFF! DSK
 PGM !    ! EFF! EFF
 PST !    ! EFF! EFF
  A  !    ! 02 ! 02
  B  !    ! 01 ! 01
```

Figure 21 **Recalled data**

1 Place the event number to be used at the center of the screen by pressing the ← key or the → key.

2 Press the MR key.

3 Press the TAKE button.
The event to be recalled will be executed.
Every time the TAKE button is pressed, the event is executed.

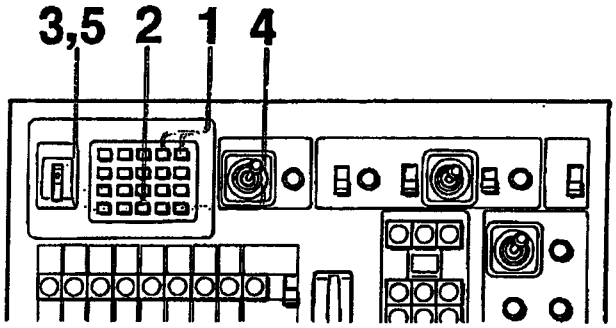
- When the MR key is pressed after selecting the event in which no data is memorized, nothing occurs.
- The event can be executed repeatedly, or two or more events can be executed automatically. Refer to "MODE SETTING".

TO TERMINATE THE EXECUTION MODE

Press the C key to execute the other event or to operate the unit manually. Or the SEG-2550/2550P keeps the mode to execute the recalled event.

TO ERASE DATA (ERASE)

When the capacity of memory becomes full, or you want to enter the data in the event in which the data has already been memorized, the memorized data should be erased.




```
(MODE)
 0:ERASE
 1:ERASE(ALL)
 2:BUZZER·····ON
 3:INCREMENT··OFF
 4:AUTO TAKE··OFF
```

Figure 22 **To erase data**

1 Place the event number whose data is to be erased at the center by pressing the ← key or the → key.
To erase the data in all events simultaneously, this step is not necessary.

2 Press the MOD key.
The menu of the mode is displayed.

3 **To erase an event**
Press the 0 key.
To erase all events
Press the 1 key.

4 Press the SET key.

5 Press the key pressed in step 3 again.
The data in the designated event(s) are erased.

MODE SETTING (MOD)

Turning the buzzer on or off, auto increment of an event number, repeated execution of an event can be set.
Press the MOD key to display the mode menu.

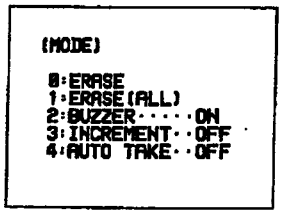


Figure 23 **Mode menu**

TO TURN ON AND OFF THE BUZZER

Every time the event is executed, the buzzer sounds. The buzzer can be cut off by setting "2:BUZZER".
ON: The buzzer sounds.
OFF: The buzzer does not sound.

1 Press the 2 key.
The figure "2" on the screen starts blinking.

2 Press the 2 key again.
ON/OFF setting is changed.

TO INCREASE THE EVENT NUMBER AUTOMATICALLY

To memorize or recall the data of the event, the event number can be automatically increased by one by setting "3:INCREMENT".
ON: The event number is automatically increased by one.
OFF: The event number does not change automatically.

1 Press the 3 key.
The figure "3" on the screen starts blinking.

2 Press the 3 key again.
ON/OFF setting is changed.

TO EXECUTE AN EVENT REPEATEDLY

The event recalled can be executed repeatedly by setting "4:AUTO TAKE".
ON: When the TAKE button is pressed, the designated event is executed repeatedly until the C key is pressed to stop the execution.
OFF: When the TAKE button is pressed, the designated event is executed once and stops.

1 Press the 4 key.
The figure "4" on the screen starts blinking.

2 Press the 4 key again.
ON/OFF setting is changed.

TO EXECUTE ALL EVENTS REPEATEDLY

When both "3:INCREMENT" and "4:AUTO TAKE" are set to ON, the execution of events starts from the designated one by pressing the TAKE button, and all events are repeatedly executed until the C key is pressed to stop execution.

DATA COMPARISON MODE (EDT)

When an event is recalled, the buttons on the control panel are automatically set according to the data in the event. To set the switches, levers, or sticks manually, use the EDT (data comparison) mode. In this mode, the indication in which direction the levers and sticks should be moved, is displayed on the monitor screen.

1 Place the event whose data is to be compared at the center by pressing the ← key or the → key.

2 Press the EDT key.
The data of the event and the indication are displayed.

To change the displayed page, press the ↓ key.

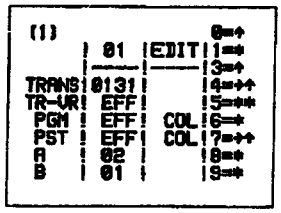


Figure 24 **Display of EDT mode**

SWITCH SETTING

Set the switches on the control panel of the SEG-2550/2550P referring to the event data displayed on the screen.

LEVER AND STICK SETTING

Move the levers and sticks referring to the indication on the right of the screen. The numbers on the screen correspond to the numbers printed on the control panel, and the arrow marks indicate the direction to move the lever or stick. Move the sticks until the arrow mark is changed to the * mark.

← Move the stick to left.
→ Move the stick to right.
↑ Move the stick or lever upward.
↓ Move the stick or lever downward.

- The data of the E-File and the setting condition on the control panel are continuously compared so that the reaction of the indication may be delayed from the actual setting.

TO TERMINATE THE DATA COMPARISON MODE

Press the C key.

REMOTE MODE

The SEG-2550/2550P can be remotely controlled by a microcomputer or a VTR editing control unit through the RS-232C interface.
When the unit is remotely controlled by external equipment, press the REM key. The SEG-2550/2550P is set in the remote control mode, and the controlled condition is displayed on the display monitor. The present condition is indicated by "*" mark before the displayed item.

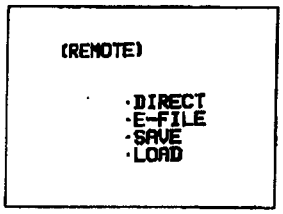


Figure 25 **Display of remote mode**

The meaning of each item displayed in the remote mode is as follows:

DIRECT: The SEG-2550/2550P is controlled by a microcomputer or an editing control unit independent of the E-File.
E-FILE: The operation of "MR" using the E-File of the SEG-2550/2550P is remotely controlled.
SAVE: The data of the E-File is saved.
LOAD: The data of the E-File is loaded.

- For details on the remote control of the SEG-2550/2550P, please refer to the technical manual (optional).

MEMORY BACKUP

The data memorized in the E-File can be held for about 24 hours by the built-in power source condensor even if the power is turned off. To charge the back-up condenser, power supply for about two hours is required. When you use the SEG-2550/2550P for the first time, supply power for two hours or more continuously.
To save the data for a long period of time, it is advisable to store the data on a memory device such as a floppydisk using an microcomputer through the RS-232C interface. For details on data saving and loading with a microcomputer, consult your authorized Sony dealer.

IN CASE OF EMERGENCY

If some fault occurs in the power supply section, the temperature in the unit becomes too high. In such a case, a buzzer sounds continuously to alert to the fault, and the emergency notice is displayed on the display monitor. Turn the power off immediately, and contact your authorized Sony dealer. If this condition remains, the power is automatically turned off after a while.

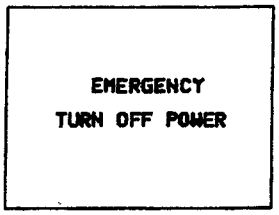
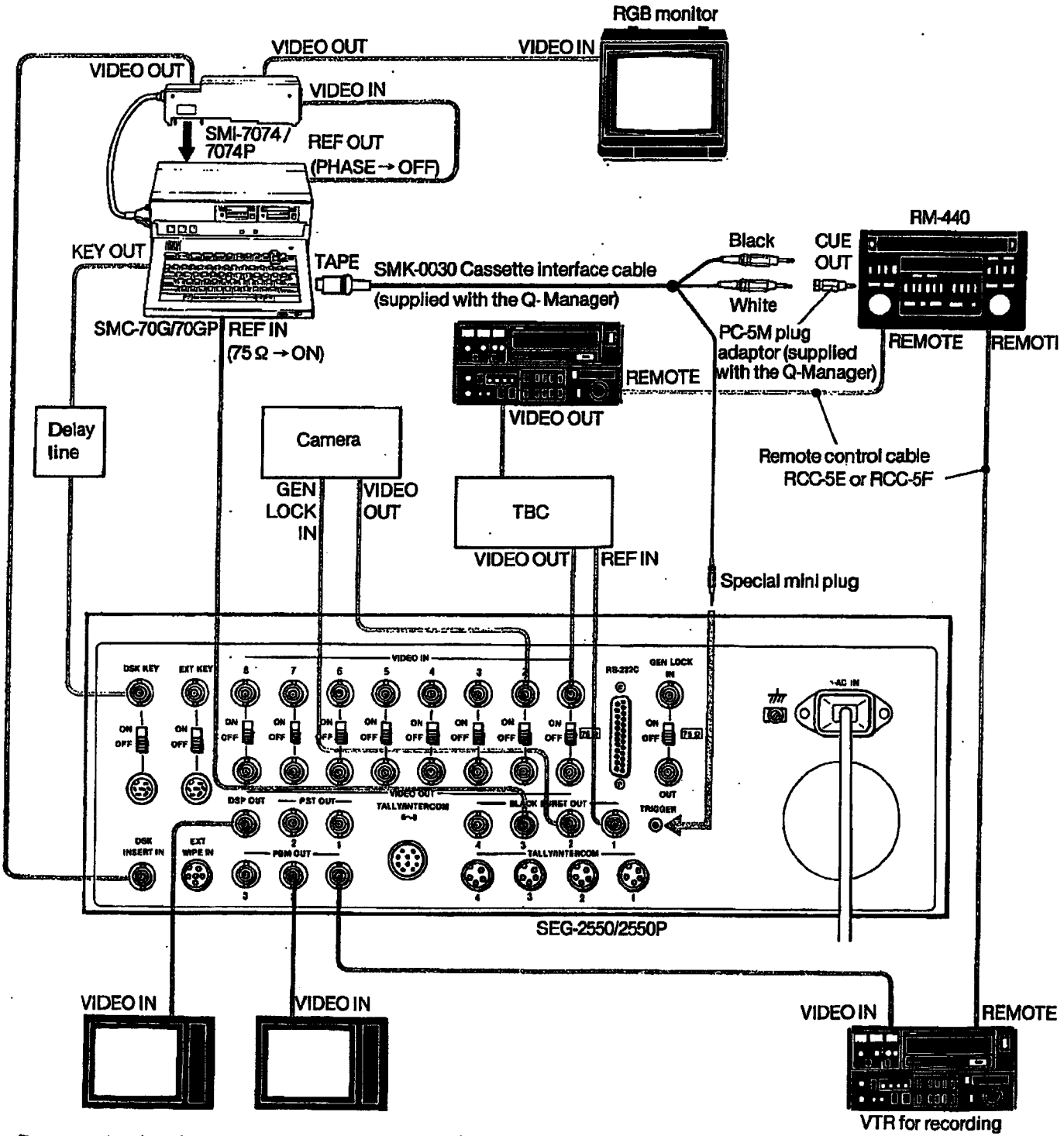


Figure 26 Emergency notice

CONTROL WITH A MICROCOMPUTER

The events memorized in the E-File can be executed by a microcomputer, a BVE-900 editing control unit, etc. It is also possible to control the functions of the SEG-2550/2550P by a microcomputer. In this section, the outline of the control with external equipment is introduced. For detailed operation, please refer to the instruction manuals provided with the equipment to be used.

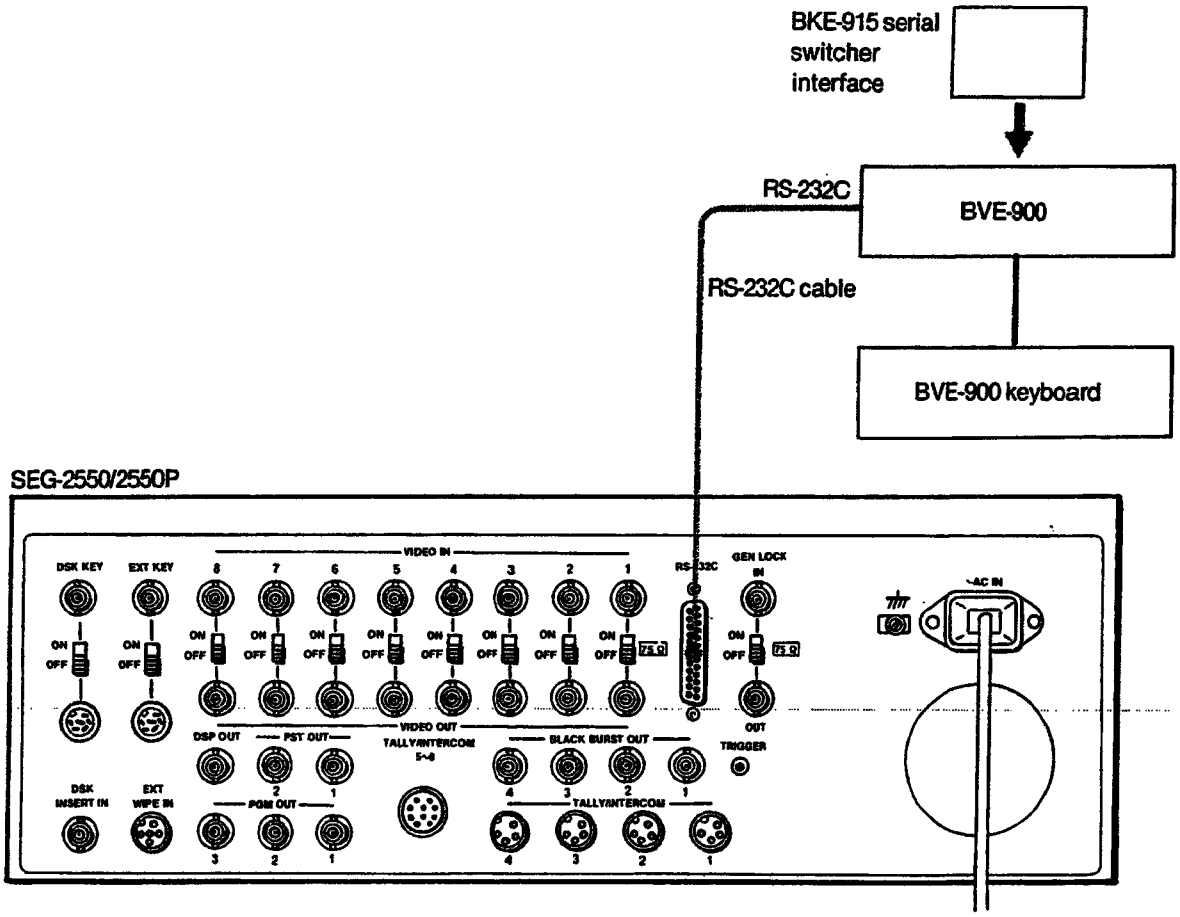
When the SEG-2550/2550P is used with a microcomputer, the events memorized in E-file can be executed. The time to execute the events memorized in the E-File can be designated and the events can be executed automatically. To control the E-File function, Q-Manager, the software of the SMC-70G/70GP, is necessary.



- Be sure to insulate the unused plug (red) with a piece of vinyl tape.
- For connections other than to the RM-440, the 75-ohm coaxial cable, 3C-2V, 5C-2V or equivalent should be used.

CONTROL WITH AN EDITING CONTROL UNIT

When an BVE-900 editing control unit is used with the SEG-2550/2550P, the SEG-2550/2550P can be remotely controlled in synchronization with the edit point of the video signal. When the BVE-900 is used, a BKE-915 serial switcher interface should be inserted into the BVE-900.
Connect the BVE-900 as illustrated below.
For the connection of the other equipment, please refer to "Basic connection" and "To connect an SMC-70G/70GP for downstream keyer".



ADJUSTING SWITCHES AND VOLUMES INSIDE THE UNIT

The switches and volumes inside the unit adjust the items which do not require the usual adjustments. The items to be adjusted are as follows:

SC and H phases
Burst and sync signal level of program and preset signals
White and black level of background
Mask of downstream keyer and external key
Height/width ratio of wipe pattern
The number of lines for pairing wipe
ON/OFF of NAM wipe
Video and setup level of program and preset output signals
Intercom level of intercom 5 - 8
Sidetone level of intercom 1 - 8

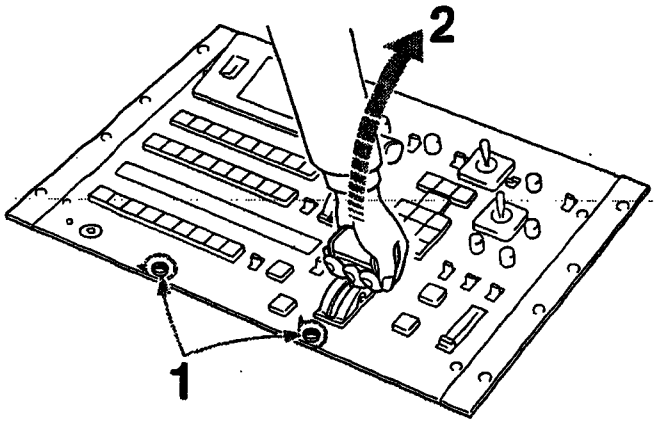
- Adjust each volume by turning it with a small screwdriver.

Note

To adjust the volumes on the 2 SY-41 board, please consult your authorized Sony dealer.

HOW TO OPEN AND CLOSE THE CONTROL PANEL

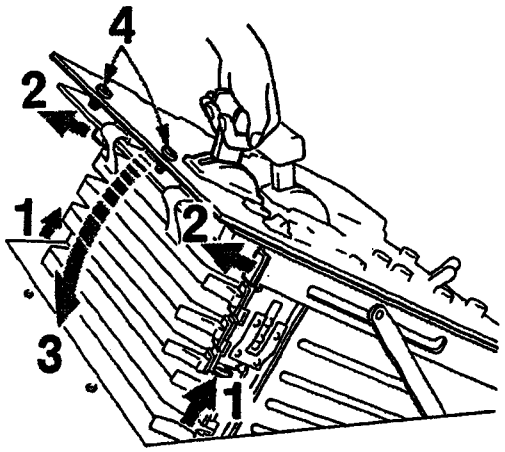
How to open the panel



1 Loosen two screws.

2 Pull up the panel by holding the lever until it locks.

How to close the panel



1 Check that the board stoppers on both sides are locked (they should be placed at the upper position).

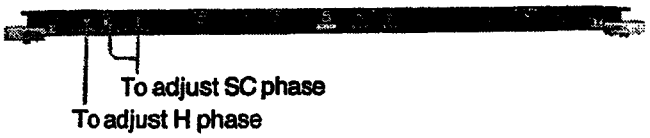
2 While holding the panel, pull the release levers on both sides to release the lock.
Be sure to hold the panel firmly, or your fingers may be catched between the side panel and the control panel.

3 Close the panel by holding the lever.

4 Fasten two screws.

ADJUSTING THE SC AND H PHASES

When the SEG-2550/2550P operates synchronizing with an external sync signal, the phases of sync signal and subcarrier of the signals supplied from the PGM OUT connector on the SEG-2550/2550P should be adjusted to the phases of the external sync signal by the volumes on the 5 SD-10 board. Adjust the phase by monitoring the indication on the preset monitor.



1 Connect the external sync signal to the GEN LOCK IN connector and to one of the VIDEO IN 1 through 8 connectors.

2 Set the PGM/PST selector to PGM.

3 Press the PST select button corresponding to the connector to which the external sync signal is connected.

4 Set the INDICATION selector on the control panel to PHASE.
The indication for adjusting phases appear on the preset monitor.

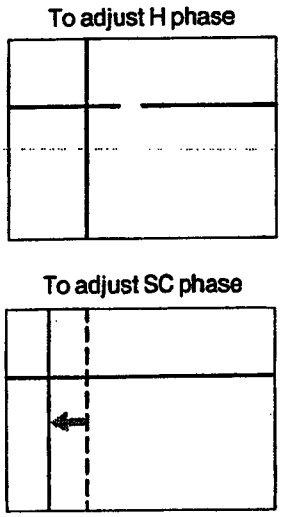


Figure 27 **Phase indication**

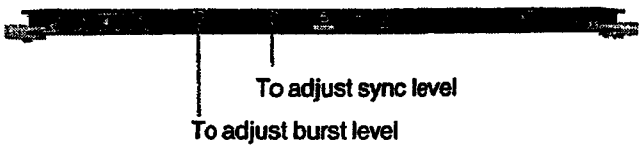
5 Adjust the H phase by turning the H.PHASE volume so that the left and right horizontal lines appear together.

6 Adjust the subcarrier phase by the SC 0°/180° selector and SC.PHASE volume.
Set the switch to the appropriate position, then turn the volume so that the right line moves to the left to become one line with the left line.
(For details, refer to "ADJUSTMENTS OF CONNECTED EQUIPMENT.")

- When the adjustment completes, set the INDICATION selector to OFF.

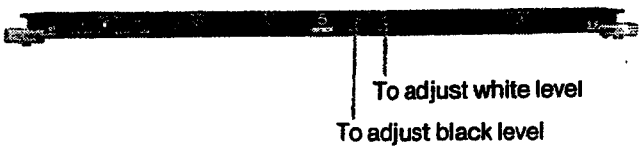
ADJUSTING BURST AND SYNC SIGNAL LEVELS

With the BURST and SYNC volumes on the 5 SD-10 board, the burst and sync signal level of program and preset output signal can be adjusted.
To adjust the level, be sure to monitor the program output signal on a waveform monitor.



ADJUSTING WHITE AND BLACK LEVELS OF BACKGROUND

When the WHT (white) or BLK (black) is selected as background, the white and black level can be adjusted by the BG volumes on the 5 SD-10 board.



MASK OF DOWNSTREAM KEYER AND EXTERNAL KEY

When the black letter on the white paper is used as a key signal source for the downstream keyer or external key, the edge of the horizontal and vertical blanking pulses may appear on the screen on some black and white cameras. In such a case, turn the volume to change the masking value so that the pulse disappears from the screen.
Adjust the mask of downstream keyer by the DSK MASK volume on the 5 SD-10 board, and adjust the mask of external key by the E.KEY MASK volume on the 4 WF-15 board.
In normal operation, this adjustment is not required.

To adjust the mask of external key

To adjust the mask of downstream keyer

ADJUSTING THE HEIGHT/WIDTH RATIO OF THE WIPE PATTERN

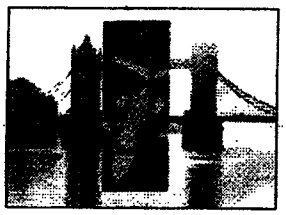
The ratio of the height to the width of the wipe pattern can be adjusted with the H WIPE volume and the V WIPE volume on the 4 WF-15 board. Only the ratio of the black patterns in the supplied "WIPE PATTERN LIST" (pattern on page 62 of this manual) can be adjusted. However the ratio of the patterns of pattern code 300 through 307 cannot be adjusted.

To adjust the width of the wipe pattern

To adjust the height of the wipe pattern

Standard pattern

Pattern with the height changed



Pattern with the width changed

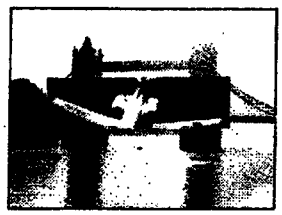


Figure 28 **Adjusting the height/width ratio of wipe patterns**

1 Set the WIPER MODE selector to FIX.

2 Turn the H WIPE volume to adjust the width of the pattern, or turn the V WIPE volume to adjust the height of the pattern.

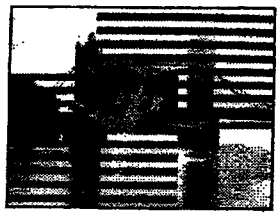
- When the WIPER MODE switch is returned to NOR, the standard ratio can be obtained.
- When the wipe pattern is extremely changed from the standard, the screen may not be wiped completely.

SELECTION OF THE NUMBER OF LINES FOR PARING WIPE

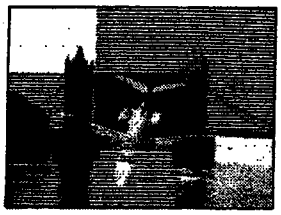
The line width of pairing wipe can be selected by designating the number of lines with the PAIRING switch on the 4 WF-15 board as follows :

4H : for 4 scanning lines
2H : for 2 scanning lines
3H : for 3 scanning lines

4 scanning lines



2 scanning lines

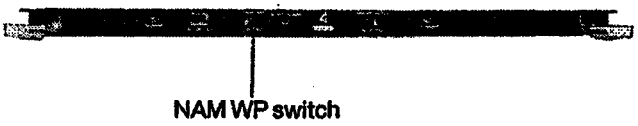


3 scanning lines

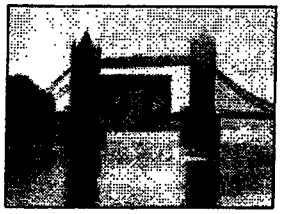
Figure 29 **Line width for pairing wipe**

NAM WIPE

The corners of the wipe pattern are rounded. This is called a NAM wipe.
Set the NAM WP switch on the 4 WF-15 board to ON.



Standard wipe



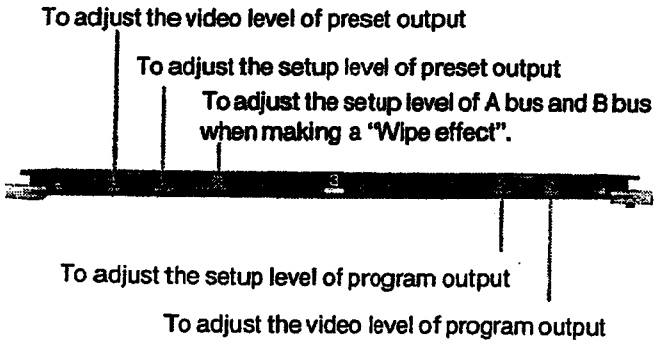
NAM wipe

Figure 30 **NAM wipe**

- The NAM wipe is valid with some patterns.

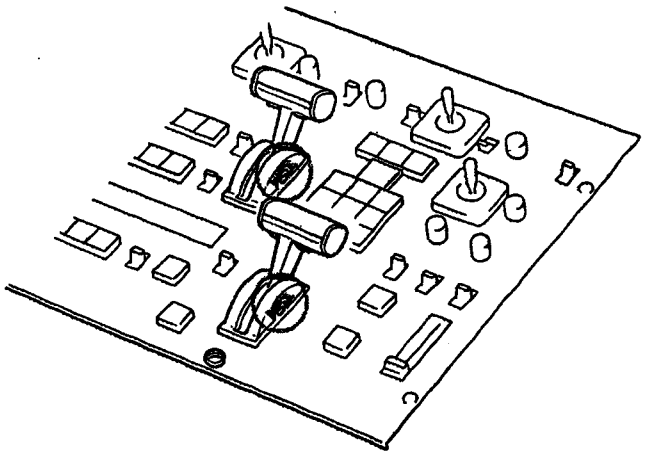
ADJUSTING
—THE VIDEO AND SETUP LEVEL OF OUTPUT SIGNALS
—THE SETUP LEVEL OF THE A BUS AND THE B BUS

- The video and setup level of signals output from the PST OUT and PGM OUT connectors can be adjusted. While monitoring the waveform on the waveform monitor, adjust the level by the PST VIDEO, PST SETUP, PGM VIDEO and PGM SETUP volumes on the 3 EF-13 board.
- The setup level of the A bus and the B bus, when making a "Wipe effect", can be adjusted and equalized with the A/B BAL volume on the same board. While monitoring their waveforms, turn the control so that the waveforms coincide.


To adjust the video level of preset output
To adjust the setup level of preset output
To adjust the setup level of A bus and B bus when making a "Wipe effect".
To adjust the setup level of program output
To adjust the video level of program output

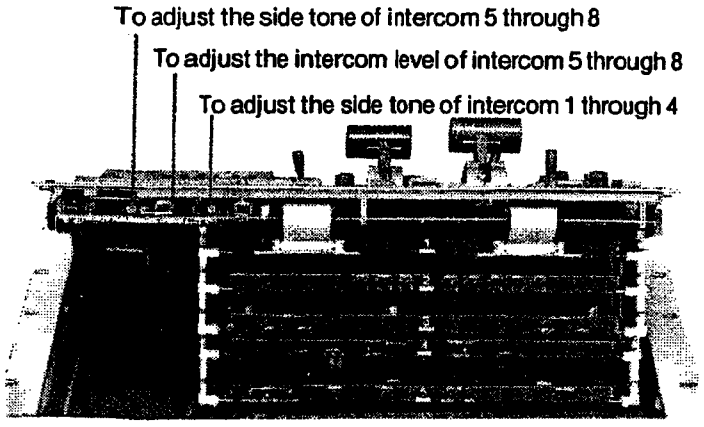
ADJUSTING THE TORQUE OF LEVERS

The torque of the PGM/PST MIX and EFF levers can be adjusted. Adjust the TORQUE screw on the right side at the base of the lever with a screwdriver.



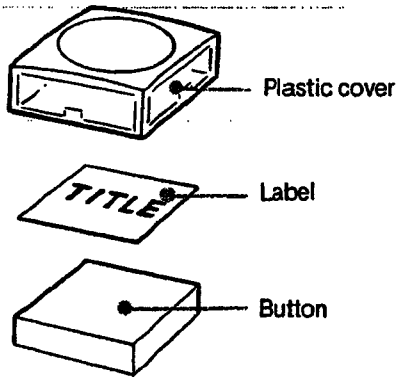
ADJUSTING THE INTERCOM AND SIDE TONE LEVELS

The intercom level of intercom 5 through 8 and the side tone level of intercom 1 through 8 can be adjusted with the volumes placed below the control panel.


To adjust the side tone of intercom 5 through 8
To adjust the intercom level of intercom 5 through 8
To adjust the side tone of intercom 1 through 4

ATTACHING THE LABEL ON THE BUTTONS

On the buttons to select a picture, labels indicating the video signal sources (supplied) can be attached as follows.

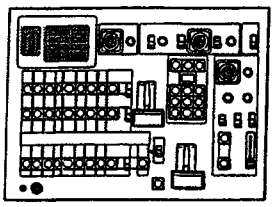


1 Remove the plastic cover on the button.

2 Put the label (supplied) on top of the button.

3 Replace the plastic cover.

LOCATION AND FUNCTION OF PARTS AND CONTROLS

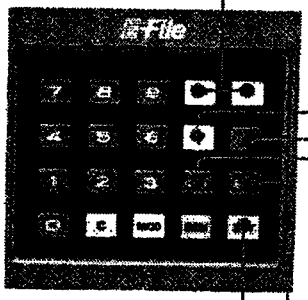


CONTROL PANEL

[1] POWER switch

The power of the SEG-2550/2550P is turned on and off. To turn the power on, press the ON side, and to turn off, press the OFF side.

[2] E-File section



←, →(event number select) keys
Press to shift the event number displayed on the display monitor. Place the event number for memorizing or recalling the data at the center.

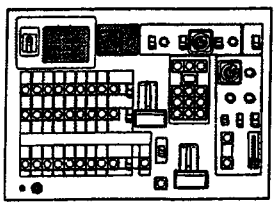
↓(page change) key
One event is composed of three pages. To view the page not displayed, press this key. Every time this key is pressed, the displayed page changes by one.

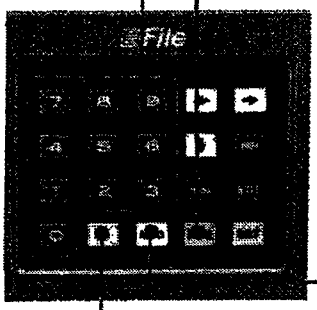
MR (memory read) key
Press to recall the memorized data. Place the event number to be recalled at the center of the display, and press this key.

Min (memory input) key
Press to memorize the setting of buttons and switches, and the movement of the levers and sticks in the E-File. Place the event number in which the data is to be memorized at the center, and press this key.

EDT (data comparison) key
The indication to compare the data memorized in the E-File and the condition of the control panel of the SEG-2550/2550P is displayed. Place the event number whose data is used at the center, and press the EDT key. The data of the event and the indication in which direction the levers and sticks should be moved will be displayed.

SET key
Use for the E-File operation.





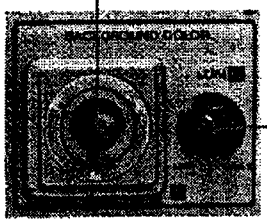
Number keys
Designate the sticks, levers and controls used for the transition and set to change the settings of the items of the mode.

REM (remote) key
When the SEG-2550/2550P is controlled with external equipment such as a microcomputer or a BVE-900 editing control unit, press this key. The SEG-2550/2550P is set in the remote control mode, and the control mode is shown on the display monitor.

MOD (mode) key
Press this key to display the mode menu. Erasing data, turning the buzzer on and off, auto increment of an event number, and auto take of an event can be set.

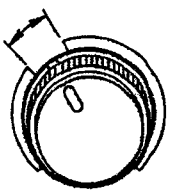
C (clear) key
Press in the following cases.
- To display the E-File data after the power is turned on.
- To display the E-File data by interrupting or terminating the current mode.

[3] BACKGROUND COLOR section

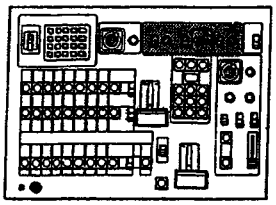


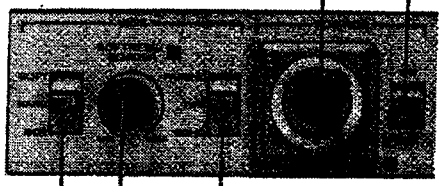
BACKGROUND COLOR stick
Adjusts the hue of the background color by rotating and the chroma level by tilting.
This stick is activated when the BACKGROUND button of the PST bus, A bus or B bus select button is pressed, and the BACKGROUND selector is set to COL.

LUM (luminance) control
Adjusts the brightness of the background color. Clockwise rotation brightens the color. Usually set the control within the range as shown below. If the control is set outside the indicated range, it is recommended to monitor the signal by a waveform monitor.



[4] Wipe effect section





POSITION stick
Adjusts the center of the wipe pattern on the screen when the POSITION switch is set to ON. The position can be adjusted only with simple circle or rectangle patterns. For details, refer to "TABLE OF WIPE PATTERNS".

POSITION switch
Activates the POSITION stick operation.
ON : The POSITION stick operation is activated, and the center of the wipe pattern can be adjusted.
OFF : The pattern is placed at the center of the screen regardless of the POSITION stick setting.

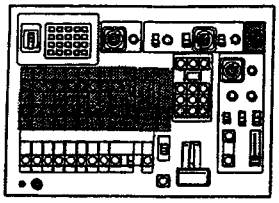
PAIRING/ECHO selector
Adds the pairing or echo effects to the selected wipe pattern.
PAIRING : A stripe pattern wipes the picture from both sides in pairs : Odd lines wipe from one side, and even lines from the other.
OFF : Neither the pairing nor echo wipe is used. The picture is wiped by a standard pattern.
ECHO : At the edge of the wipe pattern, new picture is wiped in several steps of gradation on the original picture as echoed.

SOFTNESS/BORDER control
Adjusts the softness of the edge of the wipe pattern when the SOFT/HARD/BDR selector is set to SOFT. When the selector is set to BDR, adjusts the width of the border of the wipe pattern.

SOFT/HARD/BDR selector
Select the edge of the wipe pattern.
SOFT : For a soft edge of wipe pattern. The softness is controlled by the SOFTNESS/BORDER control.
HARD : For a sharp edge of a wipe pattern.
BDR : To add a border to a wipe pattern. The width of the border is adjusted by the SOFTNESS/BORDER control, and the color is adjusted by the BACKGROUND COLOR stick and LUM control. The color is the complementary color of the indication.

[5] EXT KEY LEVEL control

Adjusts the key level of the key signal connected to the EXT KEY connector. Turn the control so that the pattern cut by the key signal will be clear.



[6] INDICATION selector

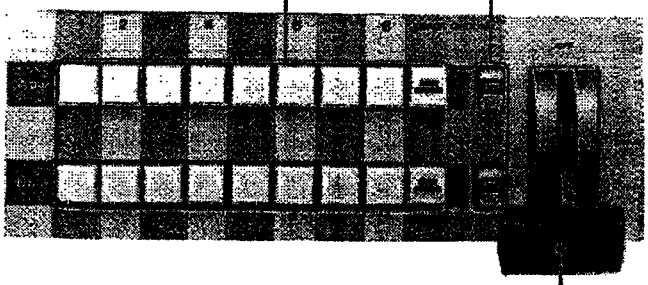
Selects what is displayed on the preset monitor.

DSP: The data of the E-File are displayed together with the picture selected by the PST bus select button.

OFF: The picture selected by the PST bus select button is displayed. In normal operation, use this position.

PHASE: For SC and H phase adjustment betweeen the SEG output signal and the external sync signal. When the PGM/PST selector is set to PGM, the phase indication pattern will appear on the preset monitor screen. Use this patten as a guide for phase adjustment.

[7] A bus/B bus select section

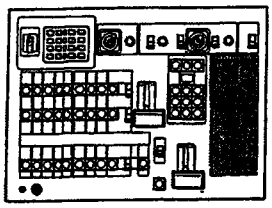


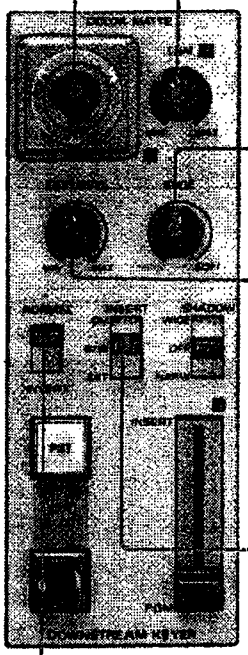
A bus/B bus select buttons
Select the pictures used for wipe, mixing and external key. Pictures can be selected by A bus select buttons and B bus select buttons separately.
On the monitor screen, the picture selected by the bus to which the EFF lever is positioned is displayed.
The buttons 1 through 8 correspond to the VIDEO IN 1 through 8 connectors on the connector panel. When a button is pressed, the picture connected to the corresponding connector is selected.
When the BACKGROUND button is pressed, the signal generated by the built-in background color generator is output. The color of the background is adjusted by the BACKGROUND selector and the BACKGROUND COLOR stick and LUM control.

BACKGROUND selectors
Selects the background when the BACKGROUND button of the A bus or B bus select buttons is pressed.
WHT: White background
COL: Color background selected by the BACKGROUND COLOR stick
BLK: Black background

EFF (effect) lever
The A bus picture is gradually replaced with the B bus picture, or vice versa when the MIX or WIPE button is engaged. When the lever is moved to the uppermost position, the A bus picture will be obtained, and when the lever is moved to the lowermost position, the B bus picture will be obtained.
The torque of the lever can be adjusted. For details, refer to "ADJUSTING THE TORQUE OF THE LEVERS".

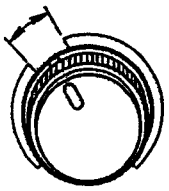
[8] DOWNSTREAM KEYER section





COLOR MATTE stick
Adjust the color of the letters or figures inserted with the downstream keyer. The hue is adjusted by rotating the stick and the chroma level is adjusted by tilting the stick.
This stick is effective when the INSERT selector is set to CM.

LUM (luminace) control
Adjusts the brightness of the color selected by the COLOR MATTE stick. Clockwise rotation brightens the color.
Usually, set the control within the range as shown below. If the control is to set outside the range, it is recommended to monitor the signal with a waveform monitor.

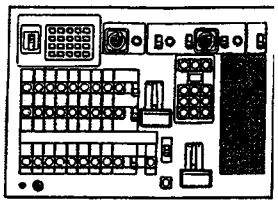


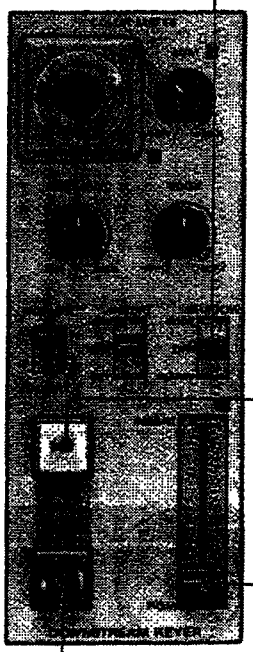
EDGE control
The edge of the letters and figures inserted with the downstream keyer is adjusted.

KEY LEVEL control
Adjusts the downstream keying level.

INSERT selector
CM: To color the inserted letters and figures with the built-in color matt generator. The color is selected by the COLOR MATTE stick and LUM control.
B/W: The inserted letters and figures will be monochrome.
EXT: When the letters from the SMC-70G/70GP microcomputer are inserted, the color supplied by the computer is used.

NORMAL/INVERT selector
NORMAL: When keying black letters against a white background.
INVERT: When keying white letters against a black background.





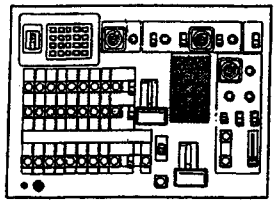
SHADOW selector
WIDE: To produce a wide shadow to the downstream keying signal.
OFF: No shadow
NARROW: To produce a narrow shadow to the downstream keying signal.
- When the letters are inserted by a microcomputer, the shadow is not added.

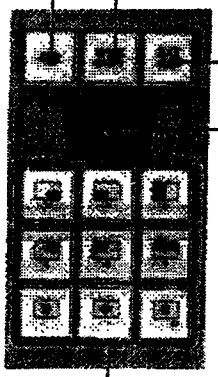
PST CUT IN/OUT button
Press to cut in or cut out the keying signal on the picture on the preset monitor to check the downstream keying. The button lights when the letters are inserted. When the button is pressed again, the letters disappear and the button light goes out.

INSERT lever
Move the lever to INSERT position to gradually insert the letters to the program picture and move the lever to PGM position to remove the letters. At the PGM position no letter will appear. When the letters are inserted, the PGM CUT IN/OUT button lights.

PGM CUT IN/OUT button
Press to cut in or cut out the letters to the program picture. The button lights when the letters are inserted.

[9] EFFECTS SELECT section





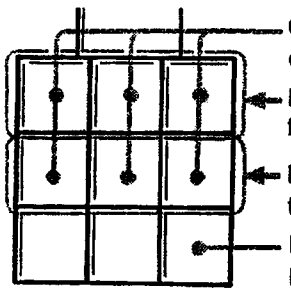
MIX (mixing) button
Press to mix the A bus and B bus pictures with the EFF lever. The button will light.

WIPE/SHIFT button
Press to wipe the A bus picture with the B bus picture or vice versa with the EFF lever.
When this button is pressed once, the button and the upper left button light and the wipe pattern is selected by the wipe pattern select buttons.
When the button is pressed again, the figures appear on the pattern code indication window, and the lower right M button starts blinking. In this condition, the wipe pattern is selected by the pattern code of three digits. The upper two-row buttons of the wipe pattern select buttons function to designate the pattern code.

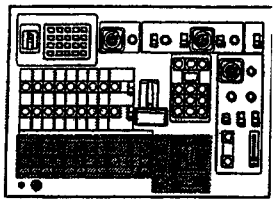
EXT KEY (external key) button
Press to key the A bus and B bus pictures using the input signal from the EXT KEY connector. The button will light.

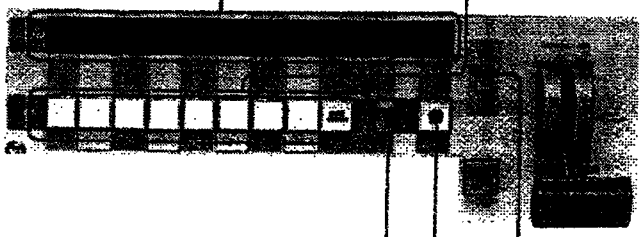
Pattern code indication window
When the wipe pattern is designated by the pattern code, the code number is displayed here. Display the code number by pressing the WIPE/SHIFT button, and designate the pattern code.

Wipe pattern select buttons
Press to select the wipe pattern to be used. There are two methods to select a wipe pattern. One is to select the pattern by pressing the appropriate button, and the pattern printed on the button is selected.
The other is to select the pattern by designating the pattern code of three digits. Set the figures in the pattern code indication window by pressing the upper two-row buttons, then press the M button. And the pattern whose pattern code is displayed in the window is selected. As for the pattern code, refer to "TABLE OF WIPE PATTERNS".
The above two methods are cyclically changed every time the WIPE/SHIFT button is presed.



[10] PGM/PST select section





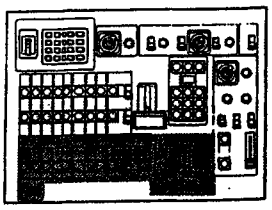
PGM (program) indicator
The number of the picture which is supplied from the PGM OUT connector (program picture) lights. The program picture is selected by the PST bus select buttons.
When the BACKGROUND button is pressed, the setting of the BACKGROUND switch is indicated: When the EFF button is pressed, the EFFECTS indicator lights while the designated effect is being executed.

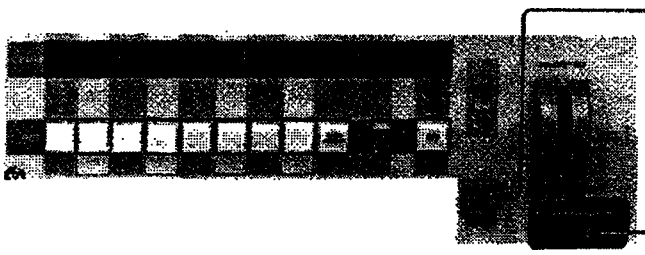
PST (preset) bus select buttons
Select the output signal from the PGM and PST OUT connectors when the PGM/PST selector is set to PGM. The pressed button and the corresponding PGM indicator light.
When the selector is set to PST, select the output signal from the PST OUT connectors. The pressed button lights.
The buttons 1 through 8 correspond to the VIDEO IN 1 through 8 connectors on the connector panel. When a button is pressed, the picture connected to the corresponding connector is selected.
When the BACKGROUND button is pressed, the signal generated by the built-in background color generator is selected. The color of the background is adjusted by the BACKGROUND selector and the BACKGROUND COLOR stick and LUM control.

PGM/PST selector
PGM: The output signals from the PGM OUT and PST OUT connectors are simultaneously selected by the PST bus select buttons.
PST: The output signal from the PST OUT connectors is selected by the PST bus select buttons.

EFF button
Press to use the effect selected by the EFFECTS SELECT buttons.

BACKGROUND selector
Selects the background color when the BACKGROUND button of the PST bus select buttons is pressed.
WHT: White background
COL: Color background selected by the BACKGROUND COLOR stick
BLK: Black background

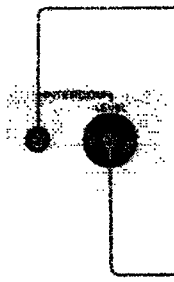




TAKE button
Instantaneously switches the preset picture and program picture. This button also functions as the trigger of the E-File operation.

PGM/PST MIX lever
The program picture is gradually replaced with the preset picture when the PGM/PST selector is set to PST.
This lever is used for mixing of the pictures selected by the PST select buttons. The position of the lever is not assigned to either the program or preset picture. The pictures will be interchanged each time the lever is move from one position to the other.
The torque of the lever can be adjusted. For details, refer to "ADJUSTING THE TORQUE OF LEVERS".

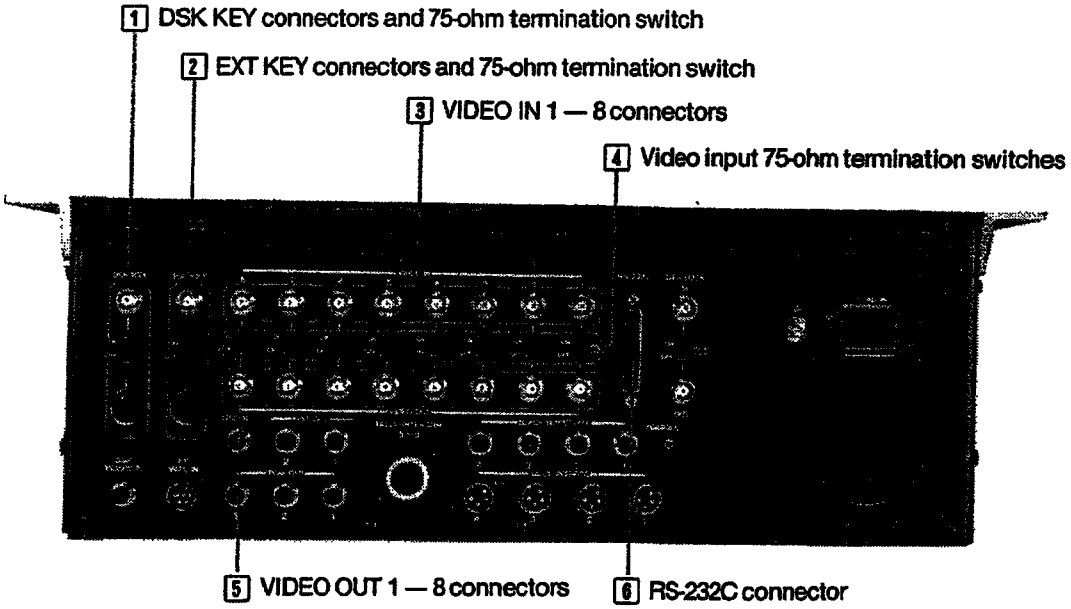
[11] INTERCOM section



INTERCOM jack (minijack)
Connect the Sony DR-100 intercom headset (optional) here to allow communication between the SEG-2550/2550P and the equipment connected to the TALLY/INTERCOM connectors. The mixed intercom sound of intercom 1 through 4 and 5 through 8 can be heard.

LEVEL control
Adjusts the sound level received from the equipment connected to the TALLY/INTERCOM 1 through 4 connectors. The intercom level of intercom 5 through 8 is adjusted by the volume inside the unit.

CONNECTOR PANEL


1 DSK KEY connectors and 75-ohm termination switch
2 EXT KEY connectors and 75-ohm termination switch
3 VIDEO IN 1 — 8 connectors
4 Video input 75-ohm termination switches
5 VIDEO OUT 1 — 8 connectors
6 RS-232C connector

1 DSK KEY (downstream keyer) connectors (BNC type, DIN 6-pin) and 75-ohm termination switch
Connect a video signal for downstream keyer operation. Connect either a black and white video camera to the DIN 6-pin connector or a video signal synchronized with the SEG-2550/2550P such as the signal from the SMC-70G/70GP micro computer to the BNC connector, and set the 75-ohm termination switch to ON.
The video signal connected to the DIN 6-pin connector can be monitored by connecting a video monitor to the BNC connector. In this case, set the 75-ohm termination switch to OFF.

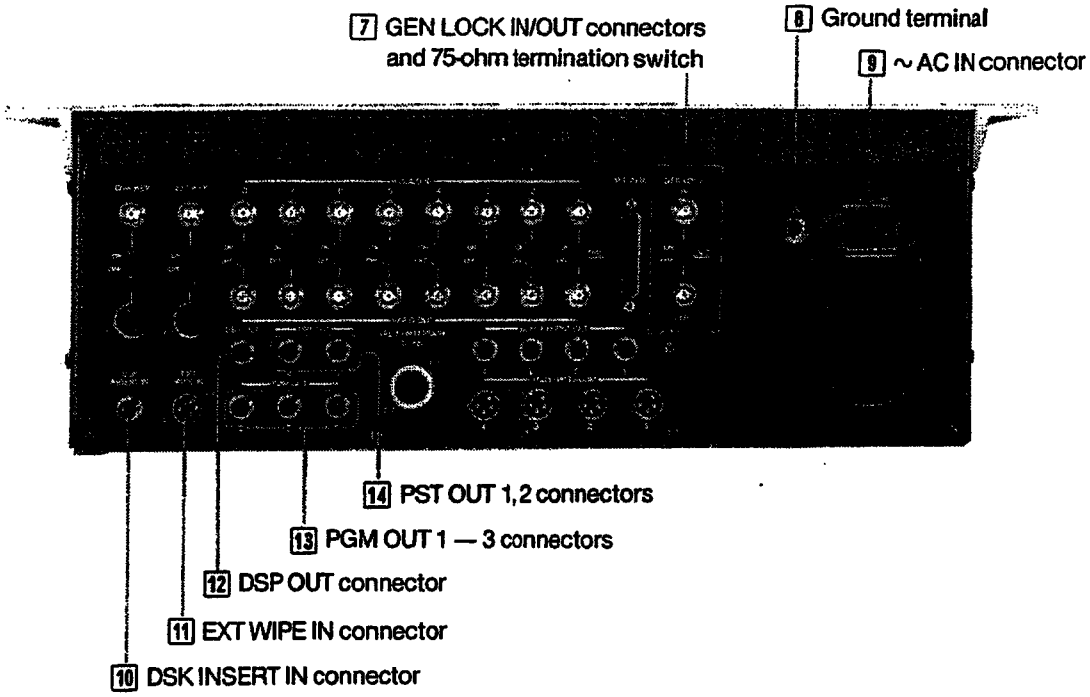
2 EXT KEY (external key) connectors (BNC type, DIN 6-pin) and 75-ohm termination switch
Connect a video signal for external key operation. Connect either a black and white video camera to the DIN 6-pin connector or a video signal synchronized with the SEG-2550/2550P to the BNC connector, and set the 75-ohm termination switch to ON.
The video signal connected to the DIN 6-pin connector can be monitored by connecting a video monitor to the BNC connector. In this case, set the 75-ohm termination switch to OFF.

3 VIDEO IN 1 — 8 connectors (BNC type)
Connect video signals from video cameras, VTRs which are connected to time base correctors, etc. The connected signals should be synchronized with the SEG-2550/2550P.

4 Video input 75-ohm termination switches
These are the termination switches connected to the VIDEO IN 1 — 8 connectors. Normally set to ON.
When any of the VIDEO OUT 1 — 8 connectors is used, set the corresponding switch to OFF.

5 VIDEO OUT 1 — 8 connectors (BNC type)
The video signals connected to the above VIDEO IN connectors are fed out from these connectors (loop-through output). Connect to the video input connectors on a video monitor to monitor the video signal connected to the VIDEO IN connector directly.
When these connectors are used, be sure to set the corresponding 75-ohm termination switches to OFF.
When they are not being used, set these switches to ON.

6 RS-232C connector (25-pin multi connector)
When the SEG-2550/2550P is controlled by external equipment such as a BVE-900 editing control unit, connect control signals from the equipment. For details of the control signals, consult your authorized Sony dealer.


7 GEN LOCK IN/OUT connectors and 75-ohm termination switch
8 Ground terminal
9 ~ AC IN connector
14 PST OUT 1,2 connectors
13 PGM OUT 1 — 3 connectors
12 DSP OUT connector
11 EXT WIPE IN connector
10 DSK INSERT IN connector

7 GEN LOCK IN/OUT (generator lock input/output) connectors (BNC type) and 75-ohm termination switch
Connect a reference VBS or black burst signal to the GEN LOCK IN connector to synchronize the SEG-2550/2550P with an external sync signal such as a house sync signal, etc. All equipment connected to the SEG will then be synchronized with this reference signal.
The reference signal connected to the GEN LOCK IN connector is fed out from the GEN LOCK OUT connector (loop-through output). Connect to the gen-lock input connector of the equipment which should be synchronized with the same reference signal. When the GEN LOCK OUT connector is used, be sure to set the 75-ohm termination switch to OFF. When it is not being used, set the switch to ON.

8 Ground terminal ( )
Connect to a good ground when required.

9 ~ AC IN connector
Connect the supplied ac power cord here.

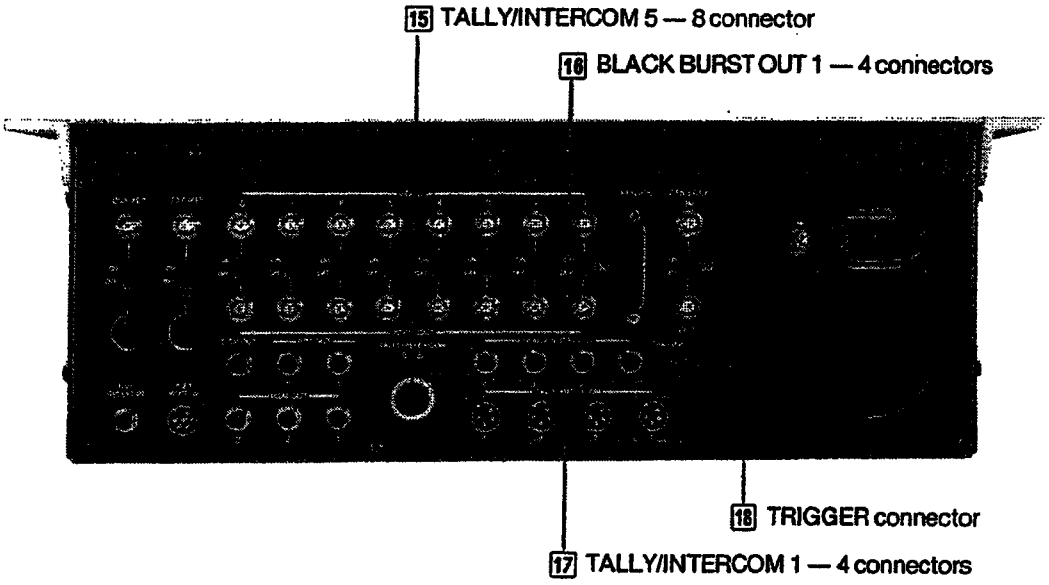
10 DSK INSERT IN (downstream keyer insert) connector (BNC type)
When the letters of the downstream keyer are inserted by the SMC-70G/70GP microcomputer, and the color supplied by the computer is used, connect the OUT connector of the SMI-7074 NTSC superimposer or the SMI-7074P PAL superimposer installed into the SMC-70G/70GP.

11 EXT WIPE IN (external wipe signal input) connector (DIN 6-pin)
Connect the optional Sony WEX-2000/2000P wipe pattern extender, etc.

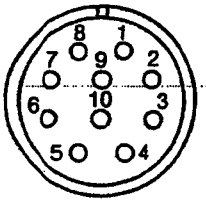
12 DSP OUT (display output) connector (BNC type)
Connect to a video input connector of a black and white video monitor (display monitor) to monitor the data and information of the E-File.

13 PGM OUT (program output) 1 — 3 connectors (BNC type)
Connect to the video input connectors of a video monitor, VTRs, etc. The signals of the program picture are output here.

14 PST OUT (preset output) 1, 2 connectors (BNC type)
Connect to the video input connectors on the preset monitors. The preset picture selected by the PST bus select buttons are output here.



15 TALLY/INTERCOM 5 — 8 connector (10 pin)
This is the tally/intercom connector for the equipment connected to the VIDEO IN 5 — 8 connectors. The pin assignment of this connector is as shown below. Make the cable using the supplied connector to fit the connector of the tally-intercom system connected here.

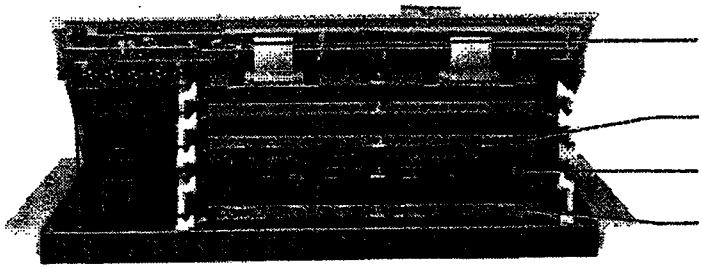


Pin No.	Signal
1	TALLY (5)
2	TALLY (6)
3	TALLY (7)
4	NC
5	NC
6	TALLY (8)
7	INCOM
8	INCOM (G)
9	TALLY (COMMON)
10	NC

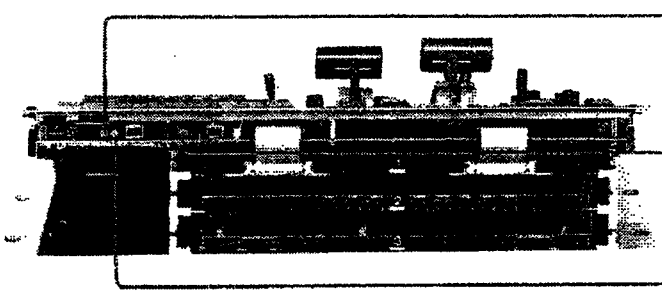
16 BLACK BURST OUT 1 — 4 connectors (BNC type)
Black burst (sync 0.3 V p-p, burst 0.3 V p-p) signals generated by the built-in sync generator are output here. Connect these outputs to the GEN LOCK IN connectors of the video equipment being used so that the equipment will be synchronized with the SEG-2550/2550P.
The same black burst signal is output at each connector in parallel. The 1 to 4 connectors are independent of the VIDEO IN connectors.

17 TALLY/INTERCOM 1 — 4 connectors (DIN 4-pin)
These are the connectors for the tally/intercom of the equipment connected to the VIDEO IN 1 — 4 connectors. Connect to the tally/intercom connector of a camera or a camera control unit using a CCDD cable. When a headset is connected to the INTERCOM connector on the control panel, the communication between the SEG and the camera operators is possible.
The TALLY/INTERCOM 1 to 4 connectors correspond to the VIDEO IN 1 to 4 connectors.
- The tally circuit incorporates a relay with a maximum pickup value of 24 V, 200 mA DC.

18 TRIGGER connector (special minijack)
This is the connector to trigger the E-File operation by an external equipment. Connect to the control connector for tape on the SMC-70G/70GP microcomputer.
When the control signal generated by the Q-Manager of the SMC-70G/70GP, the same function as the TAKE button pressed can be obtained.



Beneath the control panel



Tally/intercome 5 — 8 side tone control
Adjusts the side tone of the tally/intercom5 to 8.

Tally/intercome 1 — 4 side tone control
Adjusts the side tone of the tally/intercom 1 to 4.

Tally/intercome 5 — 8 level control
Adjusts the level of the tally/intercom 5 to 8.

3EF-13 board

PST VIDEO (preset video level) control volume
Adjusts the video level of the output signal from the PST OUT connectors.

PST SET UP (preset set up level) control volume
Adjusts the set up level of the output signal from the PST OUT connectors.

A/B BAL (balance) control volume
Adjusts and equalizes the setup level of the A bus and the B bus when making a "Wipe effect".

PGM SET UP (program set up level) control volume
Adjusts the set up level of the output signal from the PGM OUT connectors.

PGM VIDEO (program video level) control volume
Adjusts the video level of the output signal from the PGM OUT connectors.

4 WF-15 board

H WIPE (width of wipe pattern) volume
When the WIPER MODE selector is set to FIX, the horizontal length of the wipe pattern is changed.

PAIRING selector
Select the line width of pairing wipe by designating the number of the scanning lines.
3H: 3 scanning lines
2H: 2 scanning lines
4H: 4 scanning lines

NAM WP (NAM wipe) switch
ON: Corners of the wipe pattern will be rounded.
OFF: Standard wipe pattern is obtained.

E. KEY MASK (external key mask) control volume
During the external key operation, mask the blanking pulse of the black and white camera connected to the EXT KEY connector if it appears.

WIPER MODE selector
NOR: The pattern of the standard width/height ratio is obtained.
FIX: The width/height ratio of the wipe pattern can be changed. Adjust the ratio by the H WIPE and V WIPE volumes.

Note
When the wipe pattern is extremely changed from the standard, the screen may not be wiped completely.

V WIPE (height of wipe pattern) control volume
When the WIPER MODE selector is set to FIX, the vertical length of the wipe pattern is changed.

5 SD-10 board

H.PHASE (horizontal phase) control volume
Adjusts the phases of the horizontal sync signal of the gen-lock reference signal and the output signal of the SEG-2550/2550P.

SC 0°/180° (SC phase select) switch
This switch roughly adjusts the subcarrier phase of the PGM output signal to the subcarrier phase of the gen-lock reference signal.

SC.PHASE (subcarrier phase) control volume
Adjusts the SC phase of the PGM output signal to the subcarrier phase of the gen-lock reference signal precisely. After adjusting the phase roughly by the SC 0°/180° switch, adjust this volume.

BURST (burst level) control volume
Adjusts the burst level of the output signals from the PGM OUT and PST OUT connectors.

SYNC (sync signal level) control volume
Adjusts the sync signal level of the output signals from the PGM OUT and PST OUT connectors.

BG BLACK (background black level) control volume
Adjusts the black level when the BLK is selected as background.

BG WHITE (background white level) control volume
Adjusts the white level when the WHT is selected as background.

DSK MASK (downstream keyer mask) control volume
During the downstream keyer operation, masks the blanking pulse of the black and white camera connected to the DSK KEY connector if it appears.

SPECIFICATIONS

Signal system
- SEG-2550: EIA standards, NTSC color system
- SEG-2550P: CCIR standards, PAL color system

Switching system: Vertical blanking switcher

Effects
- MIX: Mixing by PGM/PST MIX lever and the EFF lever
- WIPE: 137 wipe patterns (selectable)
  Wipe edge : The softness is continuously variable.
  Border : Hue, chroma, luminance and width are continuously variable.
  Pairing : Scanning lines 2 lines/3 lines/4 lines (selectable)
  Echo: Possible
- EXT WIPE: WEX-2000/2000P wipe pattern extender is usable.
  EXT WIPE IN connector : 6-pin DIN
- EXT KEY: Output signal (6-pin DIN only) : HD, VD, 4 V p-p, 75 ohms, unbalanced
  Input signal (BNC and 6-pin DIN) : 0.7 V p-p (video) or 1 V p-p (VS), 75 ohms, unbalanced
  EXT KEY connector : BNC type and 6-pin DIN, with 75-ohm termination switch
  Slicer circuit is included (Clip level is variable).
- DOWNSTREAM KEYER
  Output signal (6-pin DIN only) : HD, VD, 4 V p-p, 75 ohms, unbalanced
  Input signal (BNC and 6-pin DIN) : 0.7 V p-p (video) or 1 V p-p (VS), 75 ohms, unbalanced
  DSK KEY connector : BNC type and 6-pin DIN, with 75-ohm termination switch
  Shadow : Wide and narrow (selectable)
  Edge: Variable
  Color matte : Continuously variable,
  Chroma : Approx. 0 – 700 mV p-p (variable according to the hue level)
  Hue : 0° – 360°
  Luminance (Y) : Approx. 50 – 700 mV
  Slicer circuit is included. (The clip level is variable.)
- BACKGROUND COLOR
  Chroma : Approx. 0 – 700 mV p-p (variable according to the hue level)
  Hue : 0° – 360°
  Luminance (Y) : Approx. 50 – 700 mV
  Continuously variable

Input signals
- VIDEO IN 1 — 8: BNC type × 8
  0.7 V p-p (VB) or 1 V p-p (VBS), 75 ohms, unbalanced, with 75-ohm termination switches (The INDICATION selector does not function with the VB input signal.)
- GEN LOCK IN: BNC type × 1
  0.3 V/0.3 V (BS) or 1 V p-p (VBS), with 75-ohm termination switch
- DSK INSERT IN: BNC type × I
  1 V p-p (VS)
- EXT WIPE IN: 6-pin DIN × 1

Output signals
- VIDEO OUT 1 — 8: BNC type × 8
  1 V p-p (VBS), 75 ohms, unbalaced (loop-through output of the corresponding VIDEO IN connector)
- PGM OUT 1 - 3: BNC type × 3
  1 V p-p (VBS), 75 ohms, unbalanced
- PST OUT 1, 2: BNC type × 2
  1 V p-p (VBS), 75 ohms, unbalanced
- GEN LOCK OUT: BNC type × 1
  (loop-through output of GEN LOCK IN connector)
- DSP OUT: BNC type × 1
  1 V p-p (VS), 75 ohms, unbalanced
- BLACK BURST OUT 1 - 4
  BNC type × 4
  0.3 V/0.3 V p-p (BS), 75 ohms, unbalanced

Tally/intercom: TALLY/INTERCOM 1 — 4: 4-pin DIN × 4
TALLY/INTERCOM 5 — 8: CCJ connector (10 pin) × 1
Maximum pick-up value in a relay: 24 V 200 mA DC

Trigger: TRIGGER : Special minijack × 1
TAKE function by earth
(OPEN : +5 V, impedance 65 kohms)

RS-232C: 9600 baud (fixed), DTE (terminal),
Signal level : ±9 V
Protocol for SEG-2550/2550P

Performance
- DG: Less than 1%
- DP: Less than 1° (APL 10 – 90%)
- Crosstalk (SEG-2550 : 3.58 MHz, SEG-2550P : 4.43 MHz)
  Over –50 dB
- Frequency response
  8 MHz ±0.5 dB
- Signal to noise ratio
  Over –60 dB

Power requirements
- SEG-2550: 120 V AC ±10%, 60 Hz±10%,
- SEG-2550P: 220 – 240 V AC ±10%, 50/60 Hz ±10%

Power consumption
SEG-2550: 82 W
SEG-2550P: 92 W

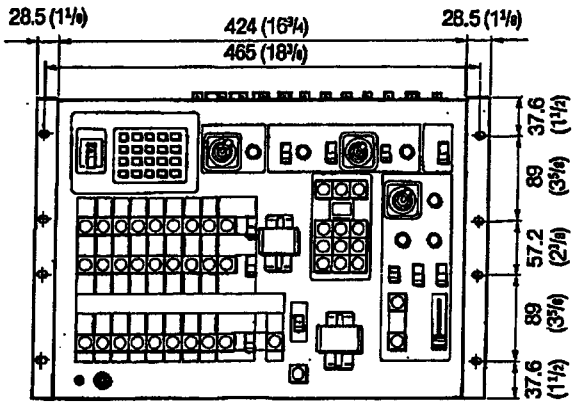
Operating temperature
0C° to 40C° (32°F to 104°F)

Dimensions: Approx. 481 × 155.5 × 310.4 mm (w/h/d)
(19 × 6⅛ × 12¼ inches)

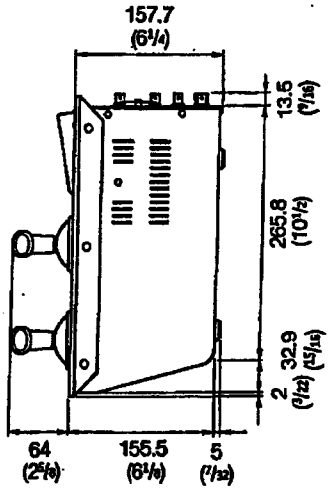
Weight: Approx. 14.5 kg (31 lb 15 oz)

Supplied accessories
- AC powe cord 1
- Wipe pattern list 1
- CCJ connector for tally/intercom 1
- Label 1

Dimension diagram



Unit: mm (inches)



While the information given is true at the time of printing, small production changes in the course of our company's policy of improvement through research and design might not necessarily be indicated in the specifications. We would ask you to check with your appointed Sony dealer if clarification on any point is required.

RECOMMENDED EQUIPMENT AND ACCESSORIES

Color video camera DXC-1820/1820P, DXC-M3A/M3AP, DXC-3000/3000P
Camera control unit CCU-1800/1800P, CCU-M3/M3P
Color video monitor PVM-1370/1370P, PVM series
Universal chroma keyer CRK-2000
Cables CCDD cables, CCF cables, UGC cables
Microcomputer SMC-70G/70GP
NTSC superimposer SMI-7074
PAL superimposer SMI-7074P
Q-Manager
Editing control unit BVE-900

- The technical information for the SEG-2550/2550P and the information on the E-File will be prepared. Please contact your authorized Sony dealer.

TABLE OF WIPE PATTERNS

Wipe No.	021	031	011	001	012	032	050	022	040	002	053	056
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	*	*	*	*	*	*	*	*	*	*	*	*
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	023	054	044	046	051	041	043	045	047	055	026	057
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	*	*	*	*	*	*	*	*	*	*	*	*
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	042	006	016	020	067	060	030	000	052	010	070	
Position	*	—	—	—	—	—	—	—	—	—	—	
Pairing	*	*	*	*	*	*	*	*	*	*	*	
Echo	*	*	*	*	*	*	*	*	*	*	*	
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	

Wipe No.	300	301	302	303	304	305	306	307				
Position	—	—	—	—	—	—	—	—				
Pairing	—	—	—	—	—	—	—	—				
Echo	—	—	—	—	—	—	—	—				
Bord/Soft	—	—	—	—	—	—	—	—				

* : can be performed with the pattern.
— : cannot be performed with the pattern.

Wipe No.	203	230	251	270	200	233	273	246	204	231	276	207
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	—	—	—	—	—	—	—	—	—	—	—	—
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	201	234	254	257	213	210	252	274	243	240	247	271
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	—	—	—	—	—	—	—	—	—	—	—	—
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	255	241	211	260	244	277	214	216	206	224	222	202
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	—	—	—	—	—	—	—	—	—	—	—	—
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	232	262	265	250	272	223	220	212	266	256	221	263	242
Position	—	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	—	—	—	—	—	—	—	—	—	—	—	—	—
Echo	*	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	140	124	114	104	117	143	141	157	146	115	105	160
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	*	*	*	*	*	*	*	*	*	*	*	*
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	135	125	147	165	163	122	107	102	136	145	153	150
Position	—	—	—	—	—	—	—	—	—	—	—	—
Pairing	*	*	*	*	*	*	*	*	*	*	*	*
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	131	134	101	161	154	151	166	155	144	121	162	142
Position	—	*	—	—	—	—	—	—	—	—	—	—
Pairing	*	*	*	*	*	*	*	*	*	*	*	*
Echo	*	*	*	*	*	*	*	*	*	*	*	*
Bord/Soft	*	*	*	*	*	*	*	*	*	*	*	*

Wipe No.	177	106	103	133	164	152	113	112	111			
Position	—	—	*	—	—	—	—	—	—			
Pairing	*	*	*	*	*	*	*	*	*			
Echo	*	*	*	*	*	*	*	*	*			
Bord/Soft	*	*	*	*	*	*	*	*	*			

REPACKING FOR SHIPMENT